

COUNTWAY LIBRARY



HC 3138 T







Digitized by the Internet Archive
in 2015

<https://archive.org/details/illinoismedicalj5190illi>

THE
ILLINOIS MEDICAL JOURNAL

CONTAINING

The Official Record of the Proceedings of the Illinois
State Medical Society and the
Papers Read

AT THE

MEETING AT CHICAGO, APRIL 29 AND 30, MAY 1 AND 2, 1903,

AND THE

PROCEEDINGS OF THE AFFILIATED SOCIETIES, TOGETHER WITH EDITORIAL
DISCUSSIONS AND ITEMS OF INTEREST TO THE
PRACTITIONERS OF ILLINOIS.

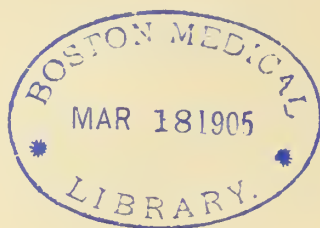
EDITED FOR THE SOCIETY UNDER THE DIREC-
TION OF THE JUDICIAL COUNCIL

BY

GEORGE N. KREIDER, A. M., M. D.

VOLUME V
JUNE, 1903, TO MAY, 1904.

SPRINGFIELD,
ILLINOIS STATE JOURNAL COMPANY,
PRINTERS AND BINDERS.



Index to Volume V.

SUBJECTS.

Abdominal and Pelvic Operations During Pregnancy, J. Clarence Webster	798	Chronic Brass Poisoning; Brass Moulder's Ague, Moyer	457
Abdominal Labor with Instrumental Delivery, W. A. Hutchins	430	Chronic Hemiplegia, Geo. E. Rosenthal	827
Abdominal Pain in Pleurisy and Pneumonia, James B. Herrick	603	Cryoscopy, Theodore Ticken	837
Accidents of the Antrum with Special Reference to a Peculiar Case, E. V. D. Morris	205	City Sanitation, Julia Meiklejohn	445
Acromegaly with Epilepsy, Julius Grinker	474	Climatology in the Treatment of Tuberculosis, O. J. Roskoten	673
Alimentary Intestification, J. W. Hensley	611	Clinical Report of Two Tumors Benefited by the X-Ray, W. J. Eddy	161
Anaemia Infantum Pseudoleukaemica, Maximilian Herzog	303	Clinical Observations on Arteriosclerosis, Chas. Elliott	728
Aneurysm of the Aorta—		Cockroaches as Conveyors of Typhoid Infection, Rosa Engleman	316
Babcock, Robert H	964	Conservative Surgery with Report of a Case, John Weir	628
Billings, Frank	963	Conservative Surgery in Crushing Injuries of the Arm, D. N. Eisendrath	599
Elliott, C. A	966	Constipation, E. G. Covington	660
Mix, Chas. L	967	County Medical Organization, J. F. Percy	445
Preble, Robert B	968	Correspondence	423
An Atypical Professional Bursa, Geo. de Tarnowsky	778	Cutaneous Tuberculosis and Blastomycetic Infection with Some Points as to Their Differentiation, F. Buckmaster	548
Angioma and its Treatment, Carl Beck	479	Cyst of Fallopian Tube, E. Mammen	660
Appendicitis from the Standpoint of the General Practitioner, W. F. Fernald	638	Cystitis, F. Kreissl	553
Appendicitis, F. C. Gremmer	441	Demonstration of McGraw Elastic Ligature, A. J. Ochsner	503
Appendicitis Simulating Sciatica, G. N. Kreider	564	Diagnosis and Treatment, A. B. Keyes	828
A Case of Combined Cord Degeneration with Pernicious Anaemia, Julius Grinker	739	Diagnosis of Small Pox, C. B. Johnson	564
A Case of Continued Development of the Fœtus in Utero After Rupture of the Membranes and Escape of the Liquor Amnii, H. W. Chapman	265	Diagnosis and Treatment of Acute Pleurisy, Edson B. Fowler	557
A Consideration of the Surgical Treatment of Chronic Bright's Disease from an Ophthalmic Standpoint, Geo. F. Suker	688	Diagnostic Significance of Pain, C. Barlow	663
A Contribution to the Diagnosis and Treatment of the Surgical Diseases of the Uterus and Kidneys, F. Kreissl	883	Dietetics in Hyperchlorhydria, B. W. Sippy	768
A Diagnosis and Treatment of Obscure Syphilitic Lesions of the Eye, E. F. Snyderacker	281	Dietetics in Treatment of Diabetes, A. L. Croftan	768
A Modification of the Krieg Operation for Deviated Septum, F. Gurney Stubbs	596	Dietetics in the Treatment of Bright's Disease, A. R. Elliott	769
A Plea for More Thoroughness in the Attempt to Prevent Ear Complications in Certain Diseases, E. E. Clark	666	Discussion of Two Cases of Vaginismus, J. C. Webster and J. B. De Lee	690
A Report of Three Medico-Legal Cases Involving the Diagnosis of Paranoia, Sanger Brown	415	Discussion of Dr. Sullivan's Cases, A. D. Bevan	685
A Simple Method of Appendectomy, Emil Ries	274	Discussion of Dr. Beck's Paper, J. Holinger	685
A Sociological View of Criminal Abortion, W. T. Fernald	57	Discussion on Trichuris Trichura, G. F. Lydston	684
Bartholinian Abscess, A. Merrill Miller	756	Discussion on Dr. Hardon's Paper, A. D. Bevan	685
Bonds and Mortgages, J. L. Houghtelling	506	Discussion on Trichuris Trichura, Albert Hassal	683
Bone Changes in Rachitis, F. S. Churchill	565	Discussion of Non-Union of Fractures, C. C. O'Byrne	575
Breast Versus Bottle in Infant Feeding, A. C. Cotton	325	Discussion of Hypernephroma of the Kidney, A. C. Croftan	575
Brometone, E. Fletcher Ingals	278	Discussion on the Theory of Squint, Drs. Snyderacker, Nance, Remmen, Fitch and Hale ...	581
Broncho Pneumonia in Children, L. M. Nifong	428	Disease of Stomach, H. C. Cushing	659
Broncho Pneumonia of Infancy, W. H. Hoskinson	662	Dislocation of the Tarsal Bones Anterior to the Astragalus (Sub-Astragaloid) Together with a Partial Rotation of the Astragalus on its Axis, J. F. Percy	619
Carcinoma of the Stomach, R. A. Kerr	675	Dislocation of the Metacarpophalangeal Joint; Irreducible under Anaesthesia. Operation, Homer M. Thomas	403
Cases Illustrating the Course and Treatment of Fecal Fistulae Which Complicate Appendicitis, Willard Bartlett	433	Ear Complications in Influenza, A. L. Adams	934
Cases Simulating Appendicitis, H. A. Brennecke	404	Early Massage and Movements in the Treatment of Sprains and Fractures, Daniel N. Eisendrath	460
Cases of Tuberculosis of the Knee, Umbilical Hernia, Appendicitis with Severe Complications, Wm. Hessert	502	Ectopic Gestation, A. L. Brittin	564
Cases of Blastomycosis and Lupus Vulgaris Treated by X-Rays, E. A. Fischkin	472	Educational Influences and Opportunities of our Civil Courts from a Medical Standpoint, O. B. Will	73
Cerebral Syphilis, Hugh T. Patrick	841	Elbow Fractures, Ato Housh	659
Changes of Address...564, 53, 189, 255, 385, 301, Chicago Items	741, 295	Enormous Prostatic Calculus; Suppuration About Stone and in Pelvis. Urethral Rectal Fistula and Operation for Same, G. Frank Lydston	576
Chorea, L. Harrison Mettler	391		

Epilepsy and Its Management, R. A. Hanna	820	On the Accessory Sinuses, W. T. Eckley	953
Epilepsy, M. S. Fletcher	563	On the Toxicity of Methyl Alcohol in Extracts and Medicine, R. H. Main	153
Etiology of Acute Bronchitis, Edson B. Fowler	809	Operative Dysmenorrhea, G. Kolischer	18
Euphthalmia as a Mydriatic for the General Practitioner, Albert B. Hale	539	Osteomalacia, C. B. Reed	566
Examinations of the Urine and Segregated Urines as a Means of Diagnosis in Surgical Diseases of the Kidneys, M. L. Harris	734	Osteomyelitis, A. G. Servoss	441
Exotic Sound in Both Ears, N. H. Pierce	593	Osteopathy, What Is It? H. S. Zimmerman	563
Exstrophy of Bladder, John B. Murphy	805	Other State Societies	180, 248
Factors That Influence Pneumonia, W. R. Jaques	771	Ovarian Dysmenorrhoea, Norman Kerr	396
Fibromyoma of Vulva, A. E. Halstead	480	Paraplegia, J. M. McClanahan and J. W. Standley	563
Food, J. A. Wesener	4	Pelvic Abscess, J. A. Baughman	16
Gonorrhoea in Small Child, Harvey Smith	658	Pemphigus Chronicus, E. A. Fischkin	792
Gastrostomy by the Franck Method, Jos. B. Bacon	222	Penetrating Wounds of the Abdomen, M. L. Harris, Jos. F. Smith	578
Graft in the Legal Profession, Clarence Darrow	847	Perforation of Drum Head by Tampons, J. Holinger	592
Hereditary Tendency to Refractive Errors in a Family, Mortimer Frank	329	Physician's Civil Liability for Malpractice, A. L. T. Williams	448
How Shall We Treat Speech Disorders, J. M. Brown	807	Physiological Gestation, E. H. Best	430
Hydrotherapy, O. J. Price	785	Pleuritic Effusion, Harvey Smith	658
Hypernephroma of Kidney with Report of a Case, R. W. Hardon	908	Pneumonia, G. G. Craig, Jr.	431
Hypodermatic Injection of Strychnia Nitrate in the Treatment of Progressive Muscular Atrophy, Sanger Brown	972	Pneumonia in Children, A. J. Foelsch	821
Hip Joint Disease, John Ridlon	479	Polycystic Kidney, Arthur Dean Bevan	600
Home Treatment of Suppurative Ear Diseases, Jos. C. Beck	582	Pregnancy Following Removal of One Ovary Resection of the Other and Round Ligaments Shortened, Anna M. Braunschworth	580
Hypernephroma, S. C. Plummer	600	Present Status of Surgical Intervention in Retro-Deviation of Uterus. Discussion by H. T. Byford, Frank Martin, Emil Ries, 981, 982.	983
Hernia of the Ovary, Appendix and Diverticulum with Abscess, Carl E. Black	523	President's Address, M. L. Harris	1
Historic Relation of Faith Healing, C. Barlow	647	Prostatectomy, Its Indications and Technique, G. Frank Lydston	709
Hospitals in the Smaller Cities, S. C. Stremmel	560	Private Hospitals as an Investment, A. H. Ferguson	512
Hereditary Syphilis, Frederick Menge	843	Professional Harmony, W. H. Hall	825
Infection with Trichuris Trichiura, Fred Fanyo	765	Psychotherapeutics, G. A. Edlen	287
Influence of Chloride of Sodium in the System in Relation to Albumen, L. J. Schifferstein	682	Puerperal Eclampsia, R. A. Noble	435
Initial Lesions of Pulmonary Tuberculosis and Its Diagnosis, Chas. S. Williamson	976	Puerperal Septicaemia, E. M. Smith	563
Indications for Surgical Interference in Appendicitis, H. W. Davis	451	Puerperal Septicemia, P. O. Carrico	625
Interscapulo-Thoracic Amputation for Sarcoma of Scapula, A. E. Halstead	502	Pulmonary Tuberculosis and Its Home Treatment, James M. Lowrie	407
Investments in General, D. R. Forgan	504	Pyogenic Inflammation of the Bone, Bayard Holmes	569
Is Radio-Therapy of Any Value in Pulmonary Tuberculosis, Karl F. M. Sandberg	856	Radio-Therapy with Report of Eleven Cases, Chas. D. Center	158
Keloid, Treatment by X-Rays, Pancreatic Cyst, Actinomycosis of Jaw, W. M. Harsha	598	Recurrent Sarcoma of the Inferior Maxilla Treated by the X-Ray, O. P. McFadden	674
Lacunar Tonsillitis, James M. Brown	272	Relative Importance to the Community of Pneumonia and Tuberculosis, Arnold C. Klebs	486
Lingua Nigra, Jos. C. Beck	591	Remarks on the Diagnosis of Tuberculosis, Roy Rogers	635
Life Insurance Investments, Robert Skene	510	Remarks on Syphilis, Hugh T. Patrick	718
Management of Crossed Eyes in Children, Willis O. Nance	212	Reports of Births and Deaths, The New Law	182
Marked Hypertrophy of the Inferior Turbinate Body, Jos. C. Beck	594	Report of a Case of Sympathetic Ophthalmia, Oscar Dodd	573
Medical Graft, H. N. Moyer	850	Report of a Case of Perforating Gastric Ulcer in Male, aged 54, J. B. Herrick	588
Medical Ethics, F. E. Wallace	563	Report of a Case of Multiple Cystic Lymphangioma in Connection with the Peritoneum and Viscera, Svenning Dahl	790
Medical Jurisprudence, Hon. J. M. Graham	564	Report of Ten Autopsies of Cases. The Cause of Death being Lesions of the Abdominal Viscera, P. L. Markley	737
Modern Medicine, W. K. Newcomb	623	Report of Epidemic of Pneumonia in the Aged, E. B. Montgomery	672
Modern Surgery of Congenital Cleft-Palate in Infancy, S. R. Hopkins	165	Rheumatism, E. A. Johnston and Robert Lumley	564
Municipal Graft, Walter L. Fisher	847	Retinal Hemorrhages in Relation to Degenerations of the Circulatory Apparatus, Thos. A. Woodruff	163
Mycosis Pharyngis, Leptothricia and Keratosis, W. P. Colwell	480	Rush Medical College Endowment	167
New Incorporations, 541, 622, 817, 741, 121, 300, News Items	55	Salpingoscopy, Jos. C. Beck	595
Normal Salt Solution in Surgery, F. C. Wallace	418	Sanitary Conditions in the Philippines	387
Notes on the Treatment of Puerperal Infection, T. J. Watkins	21	Scurvy, O. W. Michael	563
Notes on Filipino Dialects, D. J. Doherty	782	Sectional Plaster of Paris Splint, L. B. Ashton	755
Observations on the Chromatic Variations and Sedimented Chlorides, Phosphates and Sulphates of the Urine, E. F. Wells and John C. Warbrick	906	Septic Endocarditis, R. S. Dubs	453
Obstipation with Complications, J. W. Evinger	645	Septicaemia, G. N. Kreider	564
Obstetrical Antisepsis, C. C. Hill	824	Septico Pyaemia, G. J. Rivard	449
Ocular Reflexes; Their Diagnosis, C. W. Hawley	668	Sewage Disposal of Inland Towns, Arthur W. Talbot	81
Olshausen's Technic of Caesarian Section, Den-slow Lewis	556	Skiagraphic Diagnostic Fallacies, John A. Robison	593
		Some Observations on Colonic Lavage, M. H. Mack	584
		Some Chicago Orthopedic Geography, F. C. Test	780

Some Methods in the Treatment of Cardiac Failure. Discussion by Dr. Parker	776	The Early Diagnosis of Typhoid Fever, Edward Wells	455
Some Observations on Iodophilia, Adolph Gehrmann	13	The Limitation of the Practical Value of Urethroscopy, Lewis E. Schmidt	467
Some Points in Regard to Post Diphtheritic Paralysis, V. J. Cohenour	936	The Mechanic Moments in the Cystoscopic Treatment of Kidney and Ureteral Diseases, Gustav Kolischer	458
Some Thoughts on Medical Organization, J. L. Lowrie	664	The Pathology and Treatment of Recent Fractures of the Patella, S. C. Plummer	503
Some Factors in the Spread of Typhoid Fever, Frank H. Russell	535	Tumor of Salivary Gland, A. E. Halstead	480
Spastic Dysphonia, John Edwin Rhodes	589	The Transmission of Syphilis by Barbers, Wm. T. Belfield	468
Spermaturia, Arthur E. Elliott	703	The Uterine Curette as a Therapeutic and Diagnostic Agent, Louis J. Pritzker	500
Speculation in and out of the Commercial Exchange, Robert Lindblom	509	Tonsil Punch Forceps, John Edwin Rhodes	594
State Control of Tuberculosis, E. M. Eckard	437	Tuberculous Disease of Bone, John Ridlon	573
State Items.....818, 656, 176, 243, 381, 294, 126, Stocks, Granger Farwell	750	The Bacteriology of Milk, W. K. Jaques	788
Successful Removal of a Cystic Fibro-Myoma of the Uterus Weighing 87 pounds, J. Clarence Webster	90	The Circulation in the Labyrinth of the Ear, Geo. E. Shambaugh	726
Surgical Treatment of Certain Fractures, L. L. McArthur	571	The Curette in Puerperal and Non-Puerperal Cases, W. P. Davidson	266
Surgical Kidney Diagnosed as Appendicitis. Anuria. Operation and Recovery, S. M. Strohecker	577	The Danger That May Lurk in Blind Eyes, Cassius D. Wescott	215
Surgical Mania, or Insanity Following Surgical Operation, Wm. H. Maley	277	The Danger of an Exclusive Milk Diet in Nephritis, Alfred C. Croftan	320
Surgery of the Hypertrophied Prostate, Bransford Lewis	444	The Dietetics of Atonic Dilatation of the Stomach, F. B. Turk	767
Symposium on the Surgical Treatment of Bright's Disease	687	The Diplococcus Scarlatinae, W. J. Class	77
Syphilitic Purpura, E. A. Fischkin	844	The Durability of the Therapeutic Effects of High Frequency Currents, W. F. Somerville	879
Syphilis, David Lieberthal	845	The General Practitioner and His Relation to Early Surgical Operations, E. B. Montgomery	193
		The Nerve Hygiene of School Children, W. M. Fitch	984
The Benefits to be Derived from Organization and How to Derive Them, F. Buckmaster ..	682	The Practice and Scientific Value of Bacteriological Examination of the Blood During Life, Ludvig Hekoten	65
The Law Suit, Judge R. A. Bussell	562	The Renaissance, J. L. Wiggins	11
The Obstetric Hand as a Substitute for Forceps, E. F. Carroll	660	The Responsibility of the Surgeon, J. E. Coleman	198
The Pathology of Endosalpingitis, Its Relation to Endometritis Oophoritis and Peritonitis. Symptoms, Diagnosis and Treatment, A. B. Heyes	828	The Secondary Results of Cardiac Disease, John A. Robison	314
The Sanitarium Treatment of Tuberculosis, H. Whitten	673	The Surgical Treatment of Trachoma with a Report of Cases and Demonstration of Methods, J. Whitefield Smith	209
The Sanitary and Medical Laws of Illinois, J. A. Egan	427	The Surgical Treatment of Hemorrhage of Stomach and Ulcer and Hemorrhage and Ulcer of the Bowel Following Typhoid Fever, also Perforation, W. W. Williams	753
Treatment of Chorea, Frank Dunham	662	The Symptoms and Diagnosis of the Suppurative Diseases of the Accessory Sinuses of the Nose, N. H. Pierce	904
Traumatic Hysteria, Hugh T. Patrick	663	The Treatment of Eye Injuries, H. Gradle ..	207
Treatment of Diptheria, Geo. Wash	428	Tonsillar Hemorrhage, Lawrence R. Ryan ..	198
Treatment of Gonorrhea in the Male, B. A. Ryerson	563	Treatment of Burns and Scalds, Chas. MacLellan	770
Tuberculin in the Treatment of Tuberculosis, J. C. Roberts	437	Treatment and Cause of Death in Placenta Previa, P. M. Burke	308
The Doctor as an Easy Mark, Norman Bridge ..	514	Treatment and Prognosis of Chronic Bright's Disease, Chas. S. Winn	760
The Etiology and Bacteriology of Pulmonary Infection with Especial Reference to the Pneumococcus, Edwin C. Rosenow	873	Treatment of the Suppurative Diseases of the Accessory Sinuses of the Nose, E. Fletcher Ingals	888
The Medical Aspects of Decapsulation of the Kidneys for the Cure of Chronic Bright's Disease, A. R. Elliott	687	Treatment of Typhoid Fever, Wm. F. Waugh ..	330
The Mercurial and Iodin Injection Treatment for Syphilis, Louis E. Schmidt	836	Tuberculosis of the Vestibule of the External Genitals in Women, J. H. Stealy	306
Therapeutic Resourcefulness vs. Nihilism, C. H. Miller	515		
The Work of the Milk Commission, Mrs. Mary R. Plummer	484	Utility of Intestinal Antiseptics in Typhoid Fever, N. D. Davis, Jr	532
The Use of the Cystoscope and Catheterizing Ureters as a Means of Diagnosis in Surgical Diseases of the Kidney, Louis C. Schmidt ..	837		
The Legal Status of the Doctor, Herbert C. Jones	143	Vibration Massage in the Treatment of Chronic Prostatitis, Louis E. Schmidt	226
The Metric System, John A. Koch	261	Varicella Resembling Variola, J. A. Egan	564
The Indications for the Use of the Tampon in the Treatment of Post-Partum Hemorrhage, C. S. Bacon	525		
Traction Injuries of Arteries, S. M. Wylie	139	What Is It? E. W. Brooks	682
Transportation of the Injured, I. L. Firebaugh ..	644	What Shall We Do in Case of Severe Spinal Injury? E. Mammen	257
Typhoid Fever, W. S. Jones, C. L. Herrick, 630, 631	631	When and When Not to Operate on the Mastoid Bone, H. Gradle	897
The Advantages of an Ambulatory After-Treatment for Some Genito-Urinary Operations, etc., Chas. C. Miller	469	Xanthoma, Lewis A. Greensfelder	599

NAMES.

Adams, A. L.—Ear Complications in Influenza	934	Cotton, A. C.—Breast Versus Bottle in Infant Feeding	325
Andrews, E. W.—Discussion on; A Consideration of the Surgical Treatment of Bright's Disease	688	Covington, E.—Constipation	660
Ashton, L. B.—Sectional Plaster of Paris Splint	755	Craig, G. G.—Pneumonia	431
Babcock, Robert H.—Aneurysm of the Aorta	964	Croftan, A. C.—Discussion on Hypernephroma of the Kidney	575
Bacon, Jos. B.—Gastrostomy by the Franck Method	222	Croftan, Alfred C.—The Danger of an Exclusive Milk Diet in Nephritis	320
Bacon, C. S.—The Indications for the Use of the Tampon in the Treatment of Post-Partum Hemorrhage	525	Dietetics in Treatment of Diabetes	768
Discussion of Obstetric Nomenclature	694	Cushing, H. E.—Diseases of Stomach	659
Barlow, C.—Diagnostic Significance of Pain	663	Dahl, Svenning—Report of a Case of Multiple Cystic Lymphangioma in Connection with the Peritoneum and Viscera	790
Bartlett, Willard—Cases Illustrating the Course and Treatment of Fecal Fistulae Which Complicate Appendicitis	433	Darrow, Clarence—Graft in the Legal Profession	847
Baughman, J. A.—Pelvic Abscess	16	Davidson, W. P.—The Curette in Puerperal and Non-Puerperal Cases	266
Beck, Jos. C.—Marker Hypertrophy of the Inferior Turbinate Body	594	Davis, H. W.—Indications for Surgical Interference in Appendicitis	451
Lingua Nigra	597	Davis, N. S., Jr.—Utility of Intestinal Antiseptics in Typhoid Fever	532
Salpingoscopy	595	De Lee, Jos. B.—Discussion on Two Cases of Vaginismus	690
Beck, Carl—Angioma and its Treatment	479	DeLee, J. B.—Discussion of Two Cases of Vaginismus	690
Home Treatment of Suppurative Ear Diseases	582	Discussion of Obstetric Nomenclature	690
Belfield, Wm. T.—The Transmission of Syphilis by Barbers	468	DeTarnowsky, Geo.—An Atypical Professional Bursa	778
Best, E. H.—Physiological Gestation	430	Dodd, Oscar—Report of a Case of Sympathetic Ophthalmia	573
Bevan, A. D.—Discussion on Dr. Hardon's Paper	685	Doherty, D. J.—Notes on Filipino Dialects	782
Discussion on Dr. Sullivan's Cases	685	Dubs, R. S.—Septic Endocarditis	453
Polycystic Kidney	600	Dunham, Frank—Treatment of Chorea	662
Discussion; A Consideration of the Surgical Treatment of Bright's Disease	690	Eckard, C. M.—State Control of Tuberculosis	437
Discussion of Dr. Hardon's Paper	685	Eckley, W. T.—On the Accessory Sinuses	953
Discussion of Dr. Sullivan's Cases	685	Edlen, E. A.—Psychotherapeutics	287
Billings, Frank—Aneurysm of the Aorta	963	Eddy, W. J.—Clinical Report of Two Tumors Benefited by the X-Ray	161
Black, Carl E.—Hernia of the Ovary, Appendix and Diverticulum with Abscess	523	Egan, J. A.—Varicella Resembling Variola	564
Branson, R.—Discussion on; A Consideration of the Surgical Treatment of Bright's Disease	690	The Sanitary and Medical Laws of Illinois	427
Braunsworth, Anna M.—Pregnancy Following Removal of One Ovary Resection of the Other and Round Ligaments Shortened	580	Elliott, C. A.—Aneurysm of the Aorta	966
Brennicke, H. A.—Cases Simulating Appendicitis	404	Eisendrath, D. N.—Conservative Surgery in Crushing Injuries of the Arm	599
Bridge, Norman—The Doctor as an Easy Mark	514	Early Massage and Movements in the Treatment of Sprains and Fractures	460
Brittin, A. L.—Ectopic Gestation	564	Elliott, A. R.—The Medical Aspects of Decapsulation of the Kidneys for the Cure of Chronic Bright's Disease	687
Brown, Sanger—A Report of Three Medico-Legal Cases Involving the Diagnosis of Paranoia	415	Clinical Observations on Arteriosclerosis	728
Hypodermatic Injection of Strychnia Nitrate in the Treatment of Progressive Muscular Atrophy	972	Spermaturia	703
Brown, James M.—Lacunar Tonsillitis	272	Dietetics in the Treatment of Bright's Disease	769
Brooks, E. W.—What is It?	282	Engleman, Rosa—Cockroaches as Conveyors of Typhoid Infection	316
Buckmaster, F.—Cutaneous Tuberculosis and Blastomycetic Infection with Some Points as to Their Differentiation	548	Evinger, J. W.—Obstipation with Complications	645
The Benefits to be Derived from Organization and How to Derive Them	682	Fanyo, Fred—Infection with Trichuris Trichiura	765
Burke, P. M.—Treatment and Cause of Death in Placenta Previa	308	Farwell, Granger, Stocks	506
Byford, T. T.—Present Status of Surgical Intervention in Retro-Relevation of Uterus	381	Ferguson, A. H.—Private Hospitals as an Investment	512
Carrico, P. O.—Puerperal Septicemia	625	Ferguson, Alexander H.—Discussion on; A Consideration of the Surgical Treatment of Bright's Disease	689
Carroll, E. F.—The Obstetric Hand as a Substitute for Forceps	660	Fernald, W. T.—A Sociological View of Criminal Abortion	57
Center, C. D.—Radio-Therapy with Report of Eleven Cases	158	Appendicitis from the Standpoint of the General Practitioner	638
Chapman, H. W.—A Case of Continued Development of the Foetus in Utero after Rupture of the Membranes and Escape of the Liquor Amnii	265	Firebaugh, I. L.—Transportation of the Injured	644
Churchill, F. S.—Bone Changes in Rachitis	565	Fisher, Walter L.—Municipal Graft	847
Clark, E. E.—A Plea for More Thoroughness in the Attempt to Prevent Ear Complications in Certain Diseases	666	Fischkin, E. A.—Syphilitic Purpura	844
Class, W. J.—The Diplococcus Scarlatina	77	Cases of Blastomycosis and Lupus Vulgaris Treated by X-Rays	472
Cohenour, V. J.—Some Points in Regard to Post Diphtheritic Paralysis	936	Fitch, W. M.—The Nerve Hygiene of School Children	984
Coleman, J. E.—The Responsibility of the Surgeon	198	Fletcher, M. S.—Epilepsy	563
Colwell, N. S.—Mycosis Pharyngis, Leptothricia and Keratosis	480	Foelsch, A. J.—Pneumonia in Children	821
		Forgan, D. R.—Investments in General	504
		Fowler, Edson B.—Diagnosis and Treatment of Acute Pleurisy	557
		Frank, Mortimer—Hereditary Tendency to Refractive Errors in a Family	329

Gehrman, Adolph—Some Observations on Iodophyllia	13	Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	690
Gilmore, R. T.—Discussion on Catarrhal Enteritis in Women Simulating Pelvic Diseases	696	Kolischer, Gustav—The Mechanic Moments in the Cystoscopic Treatment of Kidney and Ureteral Diseases	458
Gradle, H.—When and When Not to Operate on the Mastoid Bone	897	Kreider, G. N.—Appendicitis Simulating Sciatica	564
The Treatment of Eye Injuries	207	Septicaemia	564
Graham, Hon. J. M.—Medical Jurisprudence	564	Kreissl, F.—Cystitis	553
Grenmier, F. C.—Appendicitis	441	A Contribution to the Diagnosis and Treatment of the Surgical Diseases of the Ureter and Kidneys	883
Greensfelder, Lewis A.—Xanthoma	599		
Grinker, Julius—Aeromegaly with Epilepsy..	474		
A Case of Combined Cord Degeneration with Pernicious Anaemia	739		
Hall, W. H.—Professional Harmony	825	Lewis, Denslow—Olshausen's Technic of Caesarian Section	556
Hale, Albert B.—Euphthalmia as a Mydriatic for the General Practitioner	539	Lewis, Bransford—Surgery of the Hypertrophied Prostate	441
Halstead, A. E.—Tumor of Salivary Glands, Fibromyoma of Vulva	480	Lieberthal, David—Syphilis	845
Interscapulo-Thoracic Amputation for Sarcoma of Scapula	502	Lindblom, Robert—Speculation In and Out of the Commercial Exchange	509
Hanna, R. A.—Epilepsy and Its Management	820	Lowrie, James M.—Pulmonary Tuberculosis and its Home Treatment	407
Hardon, R. W.—Hypernephroma of Kidney with Report of a Case	908	Some Thoughts on Medical Organization ..	664
Harris, M. L.—Examination of the Urine and Segregated Urines as a Means of Diagnosis in Surgical Diseases of the Kidneys	734	Lumley, Robert—Rheumatism	564
Harris, M. L.—Penetrating Wounds of the Abdomen	599	Lydston, G. F.—Discussion on Trichuris Trichuria	684
Harsha, W. M.—Keloid Treatment by X-Rays. Pancreatic Cyst. Actinomycosis of Jaw ..	598	Prostatectomy; Its Indications and Technique	709
Hassall, Albert—Discussion on Trichuris Trichura	683	Discussion on Trichuris Trichuria	684
Haskinson, W. H.—Broncho-Pneumonia of Infancy	662	Enormous Prostatic Calculus * * Suppuration About Stone and in Pelvis. Urethral Rectal Fistula and Operation for Same	576
Hawley, Clark W.—Ocular Reflexes	668		
Hensley, J. W.—Alimentary Putrefaction ..	611	McArthur, L. L.—Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint ..	689
Herrick, C. L.—Typhoid Fever	621	McClanahan, J. M.—Paraplegia	563
Herrick, James B.—Abdominal Pain in Pleurisy and Pneumonia	603	McFadden, P. O.—Recurrent Sarcoma of the Inferior Maxilla Treated by the X-Ray	674
Report of a Case of Perforating Gastric Ulcer in Male, aged 54	588	MacLellan, Chas.—Treatment of Burns and Scalds	770
Hektoen, Ludvig—The Practice and Scientific Value of Bacteriological Examinations of the Blood During Life	65	Mack, Wm. H.—Some Observations on Colonic Lavage	584
Herzog, Maximilian—Anaemia Infantum Pseudoleukaemia	303	Main, R. H.—On the Toxicity of Methyl Alcohol in Extracts and Medicine	153
Hessert, Wm.—Cases of Tuberculosis of the Knee, Umbilical Hernia, Appendicitis with Severe Complications	502	Maley, Wm. H.—Surgical Mania or Insanity Following Surgical Operations	277
Hill, C. C.—Obstetrical Antisepsis	824	Mammen, E.—Cyst of Fallopian Tube	660
Hopkins, S. R.—Modern Surgery of Congenital Cleft-Palate in Infancy	165	What Shall We Do in Case of Severe Spinal Injury?	257
Holischer, G.—Operative Dysmenorrhea	18	Markley, P. L.—Report of Ten Autopsies of Cases. The Cause of Death Being Lesions of the Abdominal Viscera	737
Housh, Ato—Elbow Fractures	659	Martin, Franklin H.—Present Status of Surgical Intervention in Reto-Deviation in Uterus ..	982
Holmes, R. W.—Discussion of Obstetric Nomenclature	692	McArthur, L. S.—Surgical Treatment of Certain Fractures	571
Holinger, J.—Discussion of Dr. Beck's Paper..	685	Meiklejohn, Julia—City Sanitation	445
Perforation of Drum Head by Tampons ..	592	Menge, Frederick—Hereditary Syphilis	843
Holmes, Bayard—Pyogenic Inflammation of the Bone	569	Mettler, L. Harrison—Chorea	391
Houghtelling, J. L.—Bonds and Mortgages ..	506	Michael, O. W.—Scurvy	563
Hutchins, W. A.—Abnormal Labor with Instrumental Delivery	430	Miller, C. H.—Therapeutic Resourcefulness vs. Nihilism	515
Ingals, E. Fletcher—Treatment of the Suppurative Diseases of the Accessory Sinuses of the Nose	888	Miller, Chas. S.—The Advantages of an Ambulatory After Treatment for Some Genito-Urinary Operations, etc	469
Brometone	27	Miller, Jos. L.—Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	690
Jacques, W. K.—The Bacteriology of Milk ..	771	Miller, A. Merrill—Bartholinian Abscess	756
Factors That Influence Pneumonia	771	Mix, Chas. L.—Aneurysm of the Aorta	967
Johnston, E. A.—Rheumatism	564	Montgomery, E. B.—The General Practitioner and his Relation to Early Surgical Operations	193
Johnson, C. B.—Diagnosis of Small Pox ..	564	Report of Epidemic of Pneumonia in the Aged	672
Jones, Herbert C.—The Legal Status of the Doctor	143	Morris, E. V. D.—Accidents of the Antrum, with Special Reference to a Peculiar Case..	205
Jores, W. S.—Typhoid Fever	630	Mover, H. N.—Chronic Brass Poisoning; Brass Moulder's Ague	457
		Medical Graft	850
Kerr, R. A.—Carcinoma of Stomach	675		
Kerr, Norman—Ovarian Dysmenorrhoea	346	Nance, Willis O.—Management of Crossed Eyes in Children	212
Keyes, A. B.—The Pathology of Endosalpingitis. Its Relation to Endometritis, Oophoritis and Peritonitis, Symptoms, Diagnosis and Treatment	828	Newcomb, W. K.—Modern Medicine	623
Klebs, Arnold C.—Relative Importance to the Community of Pneumonia and Tuberculosis ..	486	Nifong, L. M.—Broncho-Pneumonia in Children ..	428
Koch, John A.—The Metric System	261	Noble, R. A.—Puerperal Eclampsia	435
Kolischer, G.—Discussion of Obstetric Nomenclature	691		
Discussion on Catarrhal Enteritis in Women Simulating Pelvic Disease	696		

O'Byrne, C. C.—Discussion of Non-Union of Fractures	575	Smith, J. Whitefield—The Surgical Treatment of Trachoma with a Report of Cases and Demonstration of Method	209
Ochsner, A. J.—Demonstration of McGraw Elastic Ligature	503	Smith, E. M.—Puerperal Septicaemia	563
Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	688	Smith, Harvey—Pleuritic Effusion, Gonorrhea in Small Child	658
Parker.—Some Methods in the Treatment of Cardiac Failure	776	Snydacker, E. F.—A Diagnosis and Treatment of Obscure Syphilitic Lesions of the Eye	281
Patrick, Hugh T.—Traumatic Hysteria	663	Somerville, W. F.—The Durability of the Therapeutic Effects of High Frequency Currents	879
Remarks on Syphilis	718	Standley, J. W.—Paraplegia	563
Cerebral Syphilis	841	Stealy, J. H.—Tuberculosis of the Vestibule of the External Genitals in Women	306
Percy, J. F.—County Medical Organization ..	442	Stremmel, S. C.—Hospitals in the Smaller Cities	560
Percy, J. F.—Dislocation of the Tarsal Bones Anterior to the Astragalus (Sub-Astragaloid) Together with a Partial Rotation of the Astragalus on its Axis	619	Stroecker, S. M.—Surgical Kidney Diagnosed as Appendicitis: Anuria Operation and Recovery	577
Pierce, N. H.—Exotic Sound in Both Ears ..	593	Stubbs, F. Gurney—A Modification of the Krieg Operation for Deviated Septum	596
The Symptoms and Diagnosis of the Suppurative Diseases of the Accessory Sinuses of the Nose	904	A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	688
Plummer, Mary—The Work of the Milk Commission	484	Suker, Geo. F.—A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	688
Plummer, S. C.—Hypernephroma	600	Talbot, Arthur N.—Sewage Disposal of Inland Towns	81
The Pathology and Treatment of Recent Fractures	503	Taylor, L. C.—Etiology and Clinical Aspects of Tuberculosis	819
Preble, Robert B.—Aneurysm of the Aorta ..	968	Test, F. C.—Some Chicago Orthopedic Geography	780
Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	689	Thomas, Homer M.—Dislocation of the Metacarpophalangeal Joint; Irreducible Under Anaesthesia Operation	402
Pritzker, Louis J.—The Uterine Curette as a Therapeutic and Diagnostic Agent	500	Tieken, Theodore—Cryoscopy	837
Price, O. J.—Hydrotherapy	785	Turck, F. B.—The Dietetics of Atonic Dilatation of the Stomach	767
Reed, C. B.—Osteomalacia	566	Wallace, F. A.—Medical Ethics	563
Rhodes, John E.—Spastic Dysphonia	589	Wallace, F. C.—Normal Salt Solution in Surgery	706
Tonsil Punch Forceps	594	Warbrick, John C.—Observations on the Chromatic Variations and Sedimented Chlorides Phosphates and Sulphates of the Urine	906
Ridlon, John—Tuberculous Disease of Bone ..	572	Wash, Geo.—Treatment of Diphtheria	428
Ries, Emil—A Simple Method of Appendectomy Present Status of Surgical Intervention in Retro-Deviation in Uterus	983	Watkins, T. J.—Discussion on Catarrhal Enteritis in Women Simulating Pelvic Disease ..	695
Discussion on; A Consideration of the Surgical Treatment of Bright's Disease from an Ophthalmic Standpoint	689	Notes on the Treatment of Puerperal Infections	21
Rivard, G. J.—Septico Pyaemia	449	Waugh, Wm.—Treatment of Typhoid Fever ..	330
Roberts, J. C.—Tuberculin in the Treatment of Tuberculosis	437	Webster, J. Clarence—Discussion of Obstetric Nomenclature	693
Robison, John A.—The Secondary Results of Cardiac Disease	314	Discussion of Two Cases of Vaginismus ..	690
Skiagraphic Diagnostic Fallacies	593	Successful Removal of a Cystic Fibro-Myoma of the Uterus Weighing 87 pounds	90
Rogers, Roy—Remarks on the Diagnosis of Tuberculosis	635	Weir, John—Conservative Surgery with Report of Case	628
Rosenow, C. Edwin—The Etiology and Bacteriology of Pulmonary Infection with Especial Reference to the Pneumococcus	873	Wells, E. F.—Observations on the Chromatic Variations and Sedimented Chlorides, Phosphates and Sulphates of the Urine	906
Roskoten, O. J.—Climatology in the Treatment of Tuberculosis	673	Wells, Edward—The Early Diagnosis of Typhoid Fever	455
Rosenthal, Geo. E.—Chronic Hemiplegia	827	Symposium on the Surgical Treatment of Bright's Disease	687
Russell, Frank H.—Some Factors in the Spread of Typhoid Fever	535	Wescott, Cassius D.—The Danger That May Lurk in Blind Eyes	215
Russell, R. A.—The Law Suit	562	Wesener, J. A.—Food	4
Ryan, Lawrence R.—Tonsilar Hemorrhage ..	198	Whitten, H.—The Sanitarium Treatment of Tuberculosis	673
Rynerson, B. A.—Treatment of Gonorrhea in the Male	563	Wiggins, J. L.—The Renaissance	11
Sandberg, Karl F. M.—Is Radio-Therapy of Any Value in Pulmonary Tuberculosis? ..	856	Will, O. B.—Educational Influences and Opportunities of our Civil Courts From a Medical Standpoint	73
Schmidt, Louis—The Mercurial and Iodin Injection Treatment for Syphilis	836	Williams, W. W.—The Surgical Treatment of Hemorrhage of Stomach and Ulcer and Hemorrhage and Ulcer of the Bowel Following Typhoid Fever, also Perforation	753
The Use of the Cystoscope and Catheterizing Ureter as a Means of Diagnosis in Surgical Diseases of the Kidney	837	Williamson, Chas. S.—Initial Lesions of Pulmonary Tuberculosis and its Diagnosis	976
The Limitation of the Practical Value of Urethroscopy	467	Winn, Chas. S.—Treatment and Prognosis of Chronic Bright's Disease	760
Vibration Massage in the Treatment of Chronic Prostatitis	226	Williams, A. L. T.—Physician's Civil Liability for Malpractice	448
Schiffenstein, L. J.—Influence of Chloride of Sodium in the System in Relation to Albumen	682	Woodruff, Thos. A.—Retinal Hemorrhages in Relation to Degenerations of the Circulatory Apparatus	163
Servoss, A. G.—Osteomyelitis	441	Wylie, S. M.—Traction Injuries of Arteries ..	139
Seufert, E. C.—Pacinean Corpuscle in Pancreas	500	Zimmerman, H. S.—Osteopathy, What is It? ..	563
Shambaugh, Geo. E.—The Labyrinth of the Ear ..	726		
Sippy, B. W.—Dietetics in Hyperchlorhydric ..	768		
Skene, Robert—Life Insurance Investments ..	510		
Smith, Jos.—Permeability of Rubber Drainage Tubing to X-Ray	578		

EDITORIALS.

A Request.....	745	Our Advertisers.....	654
An Apology.....	168	Opinions of Illinois Editors.....	125
Annual Meeting at Peoria.....	812	Our New Constitution.....	69
A Component Society.....	169	Our District Society.....	169
Are all Diseases Caused by Pathogenic Bacteria or their Toxic Ptomaines? Must every Disease have but one Specific Bacterium or its Ptomaine, for its Cause Regardless of other Clinical Diagnostic Symptoms	334	Our Current Literature	172
A Symposium on Tuberculosis.....	543	Purification of the Water Supply	291
Called Down.....	651	Robert Boal	124
Correction	655	Robert Koch	812
County Societies Attention	336	Remarkable Occurrence at Dunning	336
Governor Yates and the Medical Profession...	923	Symposium on Tuberculosis	651
Governor Yates and the Society Bogy.....	37	Should We Ask for Such a Law	744
Greater Caution in Dispensing Strychnine...	543	The Chicago Drainage Canal	123
Iroquois Theatre Memorial.....	745	The Question of Dues	170
Index of Volume IV.....	122	The Field of the State Medical Journal	231
Lawyers Examined and Authorized to Practice in Illinois by the Supreme Court.....	336	The Value of Blood Examination in General Practice	234
Mortality Statistics of Illinois Cities for May, 1903.....	125	The Smaller German Universities	292
Mortality Statistics of Illinois Cities for April, 1903.....	42	The Question of Advertisements	742
Mortality Statistics for Illinois Cities for September, 1903.....	336	The Fifty-fourth Annual Meeting	921
Medical Study in Berlin.....	229	The Truth About Smejkal	923
Mr. Edison's Wisdom.....	333	The Law Authorizing Public Accountants	419
Needs of the State Institutions of Illinois	423, 546, 652,	The Chicago Meeting	40
New Year's Greeting.....	542	The Proposed Law Defeated	41
		Unfortunate Error	452
		Value of Medical Organization	171
		What is Meant by the Natural Vital Resistance to the Influence of Toxic or Distributing Agents in the Living Human Body? The Vis Medicatrix Natural of Earlier Writers. What are the Elements of Which it is Composed; and How May They be Strengthened or Impaired	544

OBITUARY.

Akers, J. W.....	301	Forbes, James.....	301
Austin, K. O.....	301	Fonds, David B.....	190
Andrews, Edmund.....	699	Gould, Birney R.....	951
Askew, J. R.....	741	Goodall, W. W.....	741
Anthony, John A.....	833	Grigson, Richard J.....	741
Adams, J. C.....	622	Gillette, S. C.....	301
Boal, Robert.....	236	Halstead, M. A.....	622
Battell, J. G.....	833	Hamilton, B. R.....	622
Bain, Edwin C.....	741	Harper, W. R.....	622
Burns, Lewis R.....	741	Harter, V. H.....	190
Baldwin, Marcellus.....	259	Heller, William H.....	951
Beebe, Albert G.....	541	Henderson, Nelson H.....	190
Benson, Valentine S.....	541	Henry, Robert F.....	190
Bronson, Henry P.....	541	Herrell, D. H.....	190
Baker, George C.....	418	Higgins, John.....	951
Bjorkman, David A. T.....	418	Hilton, Joseph H.....	190
Brand, Mathias.....	418	Hutchins, Asa V.....	190
Brydon, James M.....	418	Hutton, William.....	418
Bailey, Anna Eliza.....	136	Hunt, Florence.....	136
Bolinger, J. A.....	136	Humble, U. M.....	741
Bennett, R. F.....	622	Jones, Hiram K.....	173
Bishop, Charles W.....	622	Jones, W. H.....	741
Boetticker, Simon.....	622	Jennings, George N.....	190
Campe, Samuel B.....	833	Kinthan, Frederick.....	741
Carter, C. C.....	951	Kendall, C. H.....	833
Cassidy, George P.....	42	Kendall, H. W.....	541
Chappell, W. H.....	622	Kerr, Charles.....	951
Cook, Edw. P.....	50	Kimbrough, Andrew H.....	301
Cook, Chas. C.....	833	Kingsley, Virgil.....	541
Cox, William M.....	671	Landon, W. M.....	670
Conroy, A. F.....	541	Legg, Charles.....	190
Clark, Richard E.....	541	Lore, Isaac N.....	176
Craig, James D.....	53	Littlefield, Hans H.....	190
Damron, T. M. C.....	622	Love, Isaac N.....	190
Diven, Adelia Barlow.....	418	Ludlow, Edmund.....	53
Deegan, William.....	136	Lyman, John C.....	833
Dick, J. K.....	300	McAlpine, A. M.....	53
Dombrowski, John Paul.....	833	Mauniere, Charles E.....	741
Elliott, William.....	741	McElvain, Perry.....	741
English, F. M.....	301	McKendree, F. D.....	833
Ellis, David.....	176	McChesney, Alfred B.....	53
Eversman, Henry.....	136	Malone, George B.....	833
Fink, Isaac W.....	44	Major, L. S.....	622
Frost, L. A.....	541		

X.

Mitchener, Guy W. O.....	833	Sims, James M.....	136
McDavitt, Virgil.....	671	Smith, Edgar D.....	136
McBride, Arthur E.....	255	Stringfield, F. M.....	301
Mix, Henry A.....	53	Silvey, Asa R.....	833
Miller, DeLaskie.....	174	Silvers, George M.....	53
Miller, Charles.....	385	Small, Harry N.....	833
McIntyre, A. J.....	418	Symons, George C.....	53
McKinney, David R.....	418	Sovereign, C. W.....	833
Noel, E. P.....	333	Schnell, Philip J. V.....	385
O'Connor, John D.....	741	Sachs, Milan.....	190
Owen, Charles S.....	622	Skelly, John I.....	951
Pettingill, John B.....	833	Stringer, Charlotte T.....	951
Pomarane, Marx.....	833	Tagert, A. T.....	136
Prescott, Elmer E.....	951	Taylor, John J.....	255
Ross, David D.....	741	Taylor, Jesse.....	418
Ridgeway, E. M.....	418	Thomas, Sidney S.....	741
Rembe, Edward.....	541	Thompson, L. G.....	418
Roberts, E. B.....	190	Tolman, Henry L.....	622
Schlesinger, L. M.....	338	Tuthill, Daniel H.....	53
Schoettensfels, Emil.....	951	Vincent, Levi.....	833
Smith, J. A.....	385	Waughop, John W.....	301
Stewart, H. L.....	541	Wade, William D.....	741
Smith, Marsh.....	418	Wingren, Edward S.....	385
Shelton, John H.....	136	Waters, L. C.....	53
		Woolsey, Gilbert R.....	190

MARRIAGES.

Abbott, Wilson R.....	622	Hawley, Joseph R.....	833
Anthony, Frank.....	1022	Hausen, Andrew C.....	740
Albright, Jacob L.....	833	Irwin, John L.....	53
Brower, Daniel R., J.....	301	Johnson, Arthur C.....	189
Baldwin, Otis J.....	541	Koch, W. A.....	136
Barker, Lewellys.....	418	Leavitt, Frank J.....	53
Brown, L. Read.....	418	Lockwood, Edward K.....	53
Buswell, Clark A.....	418	McEnery, J. C.....	951
Butler, Robert N.....	418	Martin, Winfield B.....	385
Beirne, Henry P.....	189	Meacham, George T.....	189
Brown, Abram.....	189	Morf, Paul F.....	190
Becker, Emil C.....	385	Morris, Thomas B.....	189
Ballard, Charles A.....	385	Noble, R. A.....	190
Banks, J. H.....	622	Oren, S. Leo.....	190
Bone, Joseph B.....	622	Potter, George A.....	951
Bruno, Giovanni B.....	622	Parker, F. W.....	301
Campbell, Wm. A.....	53	Patchen, C. C.....	385
Colby, C. P.....	385	Prescott, Harry V.....	191
Coleman, W. W.....	385	Parker, George Wm.....	541
Craig, John G.....	385	Priest, Thomas W.....	951
Child, Elizabeth Janet.....	255	Rimmerman, Victor H.....	951
Campbell, Richard L.....	418	Rhodes, Lewis.....	136
Coleman, W. W.....	418	Salinger, David.....	833
Christie, Robert James.....	418	Spalding, Robert E.....	833
Campbell, Robert F.....	541	Sargent, Evlan.....	301
Corbus, B. C.....	541	Shurtle, Abraham G.....	301
Cornish, James V.....	301	Stuttle, Albert S.....	53
Cord, Charles E.....	833	Schlieffarth, Herman F.....	383
Collins, Lorin C.....	833	Shanahan, B. F.....	385
Colwell, Nathan P.....	53	Stevenson, Henry M.....	541
Dearduff, Arthur.....	53	Speed, Kellogg.....	951
Dinges, Edwin K.....	418	Van Zandt, Guy B.....	53
Donaldson, Roy S.....	418	Vernon, H. G.....	385
Damiani, Joseph.....	189	Wiles, A. M.....	541
Downing, Henry L.....	189	Williamson, Charles S.....	385
Franklin, S. J.....	189	Wernham, James I.....	301
Goldstein, Mark T.....	136	Wuerth, John J.....	301
Gleeson, Benjamin.....	189	Younger, Charles B.....	541
Holinger, Jaques.....	255	Young, John Calvin.....	53
Hill, Green E.....	189		
Hairgrove, John W.....	189		
Howatt, A. B.....	136		
Herring, William.....	622		

TRANSACTIONS OF STATE SOCIETY.

Constitution Adopted at the Chicago Meeting	30,	36	Memoir of E. P. Cook, by C. C. Hunt	197
Committee on Medical Legislation of the American Medical Association	243		Members House of Delegates American Medical Association	114
Embalmers Bill Disapproved	55		Minutes of the Fifty-third Annual Meeting of the Illinois State Medical Society	92,
Legislative Committee Report	747		Minutes of Section I	117
Malpractice Suits, H. N. Moyer	383		Minutes of Section II	119
Principles of Medical Ethics of the American Medical Association	239		Minutes of Section III	121
Pure Food Law	238		Report of Chairman of Committee of Arrangements Stowell	114
Recent Illinois Contributors to Current Literature	249		Report of the Committee on the Pharmacopoeia	109
Addresses of Welcome	94,	95	Report of Committee on Councilor Districts	112
Editors Welcome	99		Report of Committee on Necrology	107
Election of Officers	113		Report of Committee on Annual Dues	113
Installation of President Black	115		Resolutions Regarding Drs. Boal and Davis	96
Judicial Council Report	101		Resolutions in Regard to Governor and Members of the Legislature	112
Members of the House of Delegates Present	116		Secretary's Report	97
			Treasurer's Report	109

CORRESPONDENCE.

Another Swindler.....	746	Koch, J. A.—Wants Reciprocity Between the States	336
Allison, W. R.—The Agent of the Peoria Health and Accident Co.....	654	National Bureau of Medicines.....	293
Barlow, C.—Notes from the Seventh Councilor District.....	656	Regarding Bloomington Meeting.....	746
Blaine, J. M.—Western Skepticism	337	Report of Executive Committee.....	747
Crutcher, Howard—Osteopathic Treatment of Urethral Stricture	574	State Board of Health acts on Tuberculosis Symposium.....	655
Correction of Dr. Rafferty's Remarks	747	Strangulation in Utero.....	235
Fairbrother, H. C.—Text of Letter sent to Members of the Profession in the Eighth Councilor District.....	817	Stiff, F. W.—Oral Hygiene in Public Schools and Institutions.....	294
Ferry, L. A.—The X-Ray in Eczema	293	Secular Press Lends Assistance.....	746
		Tanner, J. Mack—Ament the Needs of the State Institutions of Illinois.....	814
		Tuley, Henry E.—Action on Dangerous Toys.....	338
		Where shall our Sons Study Medicine.....	236

CHICAGO MEDICAL SOCIETIES.

Aux Plaines Branch	136, 339,	601	Medical Examiners Association	371,	601
Chicago Medical Society, Meeting of January 6	765		Meeting of October 21st	453,	33
Chicago Medical Society, Meeting of January 20	767		Meeting of October 28th	459,	39
Chicago Medical Society, Meeting of January 27	770		Meeting of November 4th	472,	52
Chicago Medical Society, Meeting of October 7th	348,	357	Meeting of November 11th	480,	60
Chicago Medical Society, Meeting of October 14th	357,	370	Meeting of the Judicial Council	697	
Chicago Medical Society, Meeting of November 25	565		North Shore Branch	136, 601,	778
Chicago Medical Society, Meeting of December 2	573		Northwest Branch	251, 372, 602,	781
Chicago Medical Society, Meeting of December 9	580		Northwestern Branch	135,	251
Chicago Climatological and Laryngological Society	581		North Side Branch	136,	372
Chicago's Health	181		North Shore Branch	182, 372,	697
Chicago Pediatric Society	781		Neurological Society	697	
Chicago Surgical Society	127, 129,	598	Pediatric Society	696	
Chicago Physicians Club	52,	133	Pediatric	372	
Chicago Gynecological Society	136,	372	Physician's Club	374	
Chicago Surgical Society	502		Physician's Club of Chicago	504	
Chicago Pediatric Society	499		Southern	370,	372
Chicago Physician's Club	133		Southwestern Section of the Chicago Medical Society	515	
Clinical Report, Geo. Rubin	380		Southwestern Medical Society	252	
Douglas Park Branch	601		Southwestern Branch	601	
Evanston	370		Southwestern	371	
Lawndale	371		Surgical	372	
			Southern District	601	
			Stock Yards District Medical Society	499	
			The Northwest Branch	500	
			West Side Branch	498, 602, 697,	780

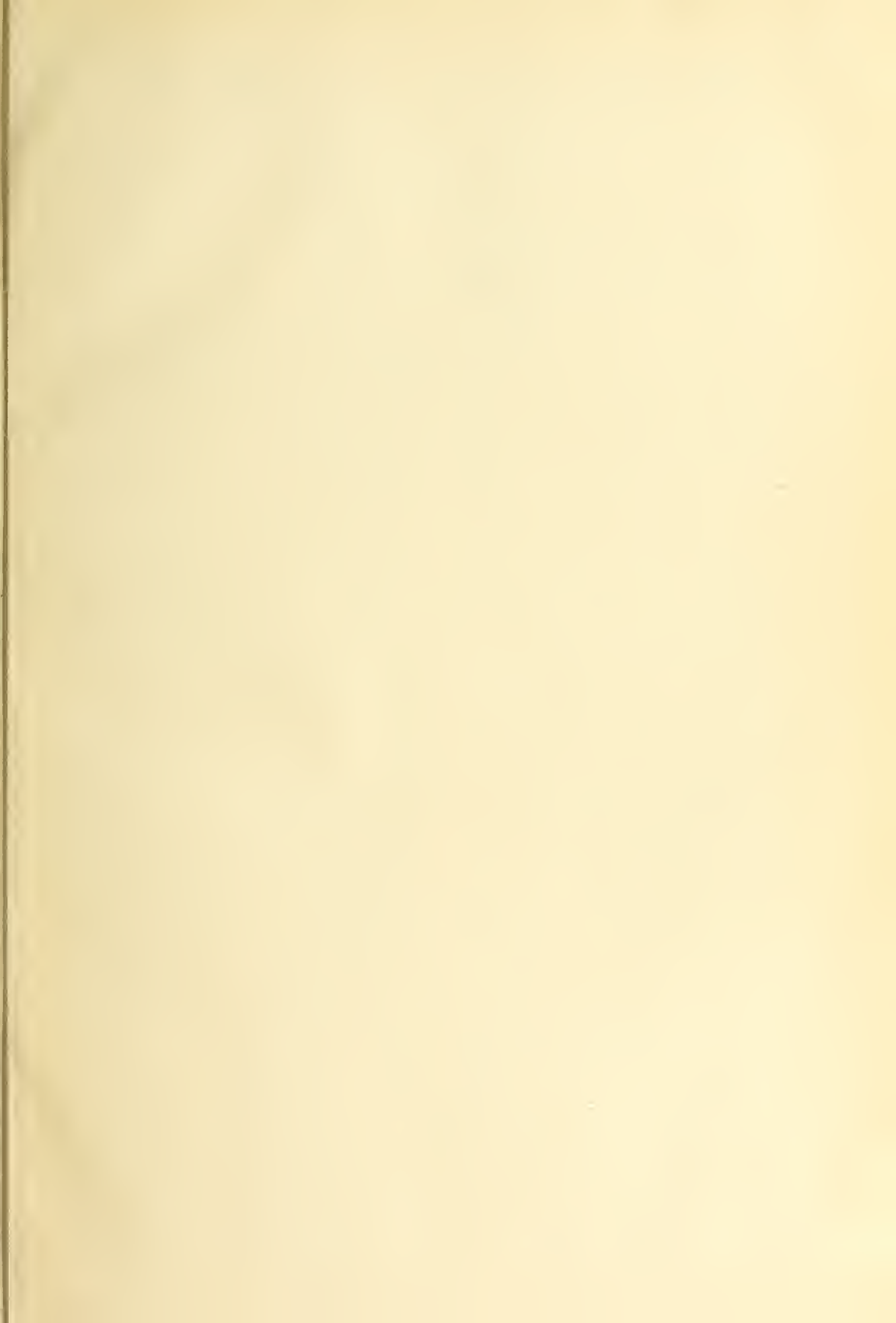
CITY, COUNTY AND DISTRICT SOCIETIES.

Adams County Medical Society	133, 187, 442, 670, 759, 827,	946	Champaign County Medical Society	188, 298, 439, 659,	821
Alton Medical Society	451		Christian County Medical Society	187, 347,	949
Bond County Medical Society	43		Clark County Medical Society	187,	562
Brainard District Medical Society	186, 189,	441	Clinton County Medical Society	443	
Bureau County Medical Society	438,	553	Crawford County Medical Society	185, 298, 443, 662,	823
Calhoun County Medical Society	300,	251	Decatur Medical Society	133, 251,	299
Cass County Medical Society	135,	949	De Witt County Medical Society	185, 440, 948,	959

XII.

District Medical Society of Central Illinois	447	Montgomery County Medical Society	44
Douglas County Medical Society	441, 946	Morgan County Medical Society, Sixth Councilor District	663
East St. Louis Medical Society	439, 658	Ogle County Medical Society	760
Effingham County Medical Society	564	Peoria City Medical Society	673
East St. Louis Medical Society	254, 300, 339, 821, 947, 950	Peoria City Medical Society	299
Edgar County Medical Society	186	Peoria City Medical Society	184, 299, 436, 666, 820, 942
Fayette County Medical Society	251, 298, 338, 433, 548, 948	Pike County Medical Society	43
Fox River Valley Medical Society.....	47, 445, 667	Pulaski County Medical Society.....	184, 251, 338, 948
Fulton County Medical Society.....	43, 186, 339	Putnam County Medical Society	564
Gallatin County Medical Society	950	Quincy Medical and Library Association	254
Hamilton County Medical Society	43, 251, 950	Richland County Medical Society	338, 300
Hancock County Medical Society	44	Rock Island County Medical Society	44, 135, 253, 436, 764, 949
Hancock County Medical Society	949	Sangamon County Medical Society	45, 188, 299, 338, 451, 564, 758, 819, 944
Jasper County Medical Society	253	Scott County Medical Society	252, 451
Jo Daviess County Medical Society....	188, 340, 758	Southern Illinois Medical Association	341, 436
Kendall County Medical Society	440	Stephenson County Medical Society	429
Lake County Medical Society	253	St. Clair County Medical Society	340, 959
Lee County Medical Society	829	Tri-County Medical Society	564
Livingston County Medical Society....	45, 442, 660	Vermilion County Medical Society	42, 133, 338, 435, 563, 666, 756
Logan County Medical Society	563	Wabash County Medical Society.....	43, 188, 435
McLean County Medical Society	134, 344, 435, 562, 660, 823, 938	Warren County Medical Society	251, 563
Macoupin County Medical Society	253, 427	Washington County Medical Society.....	184, 949
Mercer County Medical Society	134, 184	Wayne County Medical Society	659
Military Tract Medical Association.....	347, 560	Western Illinois District Medical Society	44
Morgan County Medical Society 663, 760, 821, 933		Will County Medical Society	760, 936
Mason County Medical Society	437, 824	Winnebago County Medical Society....	299, 434, 760





8584

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V.
No. 1.

Springfield, Ill., June, 1903.

{ SUBSCRIPTION
\$3.00 A YEAR.

PRESIDENT'S ADDRESS.*

BY M. L. HARRIS, M. D., CHICAGO.

When a person decides to engage in the practice of medicine as a life's work, it is to be supposed that he does so with the hope and expectation of making a success of the undertaking. It is not to be concluded from this, however, that the end which each person has in view is identical, for opinions may vary greatly as to what constitutes success, and the ends sought therefore may be widely divergent.

If each person be permitted to define success as applied to himself, then it will probably be necessary to admit that the majority of individuals succeed. But success is a word of many meanings. When it is applied to mean the termination of an act or an affair in a favorable manner or in the manner desired, then it is easily defined and easily understood; but when it is applied to an individual's life, to his works, to the sum total of his activities, then forsooth it is difficult to define what is really meant by the term "a successful life." The question may be viewed from so many different standpoints, that a concise definition comprehensive enough to cover all the various phases of the question is indeed difficult or impossible to form. Even if we limit our inquiries to but a single vocation, as for instance, the practice of medicine, we still meet with many difficulties, for what one person would consider a successful physician another would hold to be a failure. Such contrary opinions are so common, that the question might almost be said to be purely a personal matter, which each one must decide for himself, and such a view is undoubtedly what gave origin to the somewhat popular definition of a successful life, viz.: "a realization of the estimate one places on oneself." Admitting much truth

in this definition, it still contains much error; for it makes the individual himself the sole judge of his own life, and the frailties of human nature are so deeply rooted that they invariably place a biased judge on the bench.

Furthermore the fulfillment of the terms of the definition produces a mental state limited to the individual himself, which might better be termed contentment than success. A realization of the estimate one places on oneself may produce in an individual a feeling of satisfaction or contentment with one's life, but that is not necessarily success. Success is something which extends beyond the individual. It is like a light which sheds its beneficent rays on all who are brought within their range.

The keeper of a lighthouse may sit within it and possess himself of a feeling of satisfaction and contentment in his work of maintaining the light, but it is the storm-tossed mariner who, searching the darkness for a guide to a safe harbor, sees the light and realizes the success of the keeper's labor.

Success therefore as applied to the life of the physician means something else than his own opinion of himself. It means the realization by others of the value of his labors, of their value not simply from a commercial standpoint, but from the standpoint of the scientist and the humanitarian, of the value to others of his knowledge and his skill.

It is the purpose of the essayist to briefly consider some of the factors which may contribute to the scientific success of the physician.

The subject may be approached from directions. We may consider on the one hand what are the elements of success which are found lacking in the ordinary physician, or on the other hand, what are the peculiar characteristics of those individuals whom we are pleased to look upon as rep-

* Read at 53d Annual Meeting, Chicago, April 30, 1903.

the highest types of scientific success in the profession?

As the latter simply possess that which the former lack, the one may be called the positive class and the other the negative. A description of one class therefore necessarily describes the other by simply reversing the signs, to use an algebraic expression.

That natural aptitude and ability count for something in determining the degree of success to which an individual may attain must be granted, as it is a common observation in all walks of life that some individuals with scarcely any opportunities in early life have struggled to the top over almost insuperable obstacles. Notwithstanding this fact, the scientific child study which so many are now vigorously prosecuting with such rich rewards for their labor, demonstrates clearly that much of the dullness, the apparent stupidity and lack of capacity to learn in the early years of life are closely related to, if not dependent on, certain physical defects, and that many of these defects and the capacity to learn have in a broad sense a nutritional basis. The value to the child and to the state of the information gained by this child study cannot be overestimated, and the knowledge thus obtained is certain to command in the near future greater respect from parent as well as from physicians and pedagogues. However, interesting and instructive a consideration of child life may be, we are compelled to pass from the early years of life to the time when the study of medicine is taken up, and discuss briefly what the physician should know and how he should be taught, in order that he may attain success as above defined.

If the life of the physician be analyzed it will be found that one of the most important, if not the chief, item of his daily work is the consideration of evidence. No court or jury was ever more occupied with evidence than is the physician in his daily

From the moment a patient enters the consultation room or he enters the sick room the physician is taking evidence. By evidence is meant everything which may be known concerning the patient, either past or present, which may possibly have a bearing on his physical or mental condition. It

includes the testimony of the patient, which we term the subjective statement, and occasionally the testimony of others as to what they have observed; it includes proof arising from one's own perception by the senses, which we term the objective findings, and lastly it includes the inductions of reason. How very important it is therefore that the physician should have a thorough knowledge of the laws of evidence, yet how sadly deficient do we find the majority of them in this respect. For the attainment of a high degree of scientific success a knowledge of logic and the theory of reasoning is essential. The physician should not only know what constitutes competent evidence, but he should know whether the evidence at hand is sufficient to warrant the drawing of deductions or conclusions. How many errors do we find due to a reasoning from particulars to particulars, or from the promised relations of one to the inferred relations of another without regard to the nature of the terms! How many men have failed from a belief so firm in an hypothesis that it could not be shaken, without recognizing the dangers of hypothetical reasoning! An hypothesis may often be extremely valuable as a working basis, but it should never be forgotten that the probabilities of it being true depend entirely on the nature of the terms. Facts may develop which may make it a proper induction, or they may fail completely, in which case it would have no value whatever. Notwithstanding this precarious nature of the hypothesis in reasoning, how often do we find one's rule of practice or one's opinion concerning a case based entirely on an hypothesis, an hypothesis the very terms of which are such as to make any logical conclusions unwarranted, yet the same are often accepted with a credulity which surpasses understanding and is beyond the pale of reason.

Let hypothesis be used when they are the best that knowledge affords, but remember their nature, and that they are often of but temporary value, always yielding in the presence of opposing facts. Another common source of error is reasoning from analogy. Analogical reasoning can never result in a demonstration, and often amounts

to but little more than a possibility. That most people are inclined to reach conclusions from insufficient evidence, or to overestimate the value of the evidence at hand is a common observation; but the physician, owing to the seriousness of the subject with which he has to deal should be particularly careful to avoid such errors.

As already stated, a part of the evidence which the physician obtains consists of the proofs arising from his own perceptions, and this knowledge obtained by his senses is as a rule by far the most important part of the evidence. It is here that the real knowledge of the scientific physician becomes so apparent. It is in the taking of this part of the evidence that his scientific training displays itself. It is a very old saying, and one that is filled with much truth when applied to the physician that "one sees only that which one has been taught to see." Let him who is unfamiliar with pathology and the microscope look through that instrument at a mounted pathologic specimen, and though he look for hours, yet will he be unable to comprehend or intelligently describe a single thing that he sees. On the other hand, let the expert pathologist bestow on the object but a momentary glance, and it becomes to him as clear as light and he can describe it to the minutest detail. How easy it is for the ophthalmologist with the ophthalmoscope to read the interior of the eye, while the beginner struggles in apparent helplessness without being able to see even the fundus at which he is intently looking.

The trained ear of the specialist detects with ease the slightest changes in the sounds of the heart, which to the untrained are but a source of bewildering confusion. And thus it is with all the senses. The sense organs are most easily excited by impressions like those which have been frequently received before, and those perceptions are most easily and quickly classified which are like those which have previously been classified. The significance of this is in showing us the necessity of training the senses.

Education in its first meaning consists in training the senses, in teaching one how to observe and what to observe. One physician excels another in this, that he has

greater powers of observation. This is apparent to no one more than it is to the great consultant who is daily called upon to meet his colleagues, usually for the purpose of deciding on questions of diagnosis. It is commonly found that errors of diagnosis are due to imperfect observation. One fails to perceive that which is present, or in perceiving it fails to comprehend its significance. One may fail to observe a thing simply from overlooking it, or from not knowing how to observe it. In the former case it is carelessness, in the latter a lack of knowledge. It is always the individual with limited powers of observation who imagines he has compassed the entire subject, while he who perceives and comprehends much, or in other words, is educated the most, recognizes first the limitations of our knowledge.

How may one become proficient in observation? First, by a careful training of the senses, a training of the senses to observe those things which are known. It is not possible for any one person to observe all things. This fact has been recognized and well expressed by that very acute observer and thinker, William Osler, who as you know is one of the foremost scientific physicians of our time. He says in a recent article: "Few of us see all the aspects of any disease; few of us recognize all the aspects of the diseases we see; but all of us can try to correlate our own observation with the facts presented by our colleagues."

This, from a man of his ability, shows that the more one knows the more one appreciates the fact that the knowledge of any individual, be it never so great, is very small in comparison with knowledge in general. Every person who is familiar with the concrete sciences, including logic, knows how difficult it is to establish a fact, or in other words, to demonstrate that a certain phenomenon is the immediate sequence of certain definite antecedents. Erroneous beliefs and unsupported alleged facts cumber the history of medicine like dead and fallen trees one's passage through a forest. Many things which at one time were firmly believed to be well established facts are now known to be errors, errors due to imperfect

observations; errors due to unsound logic; conclusions drawn from insufficient or incorrect data.

Numerous illustrations of such erroneous beliefs will readily suggest themselves to all who are familiar with the growth of medicine. The reason for the errors is not difficult to understand. As already stated, the difficulties of establishing the sequence of phenomena are often very great. The antecedents of any phenomenon may be very numerous. We may be familiar with but few of them, while the great majority may be absolutely unknown. Conclusions therefore based on such imperfect knowledge are very likely indeed to be wrong, and are only to be corrected when the antecedents in question become known. What pertains to the establishment of truths in general pertains likewise when applied to specific cases, and every physician will recall certain cases in which certain conclusions, namely diagnoses, were made, based on certain observed facts; but the progress of the cases not fulfilling the predictions made, consultants were called in who were able to observe certain other facts which thus far had escaped observation, and which, disclosing the errors of the previous conclusions, led to correct deductions. These are familiar incidences in the life of every physician.

Or it not infrequently happens, even where the best of minds are brought to bear on a case, that the observed facts are too few to enable a correct conclusion to be formed, as is shown by the autopsy.

It frequently happens that an erroneous conclusion regarding a case is due to a conscious or unconscious bias on the part of the physician. A thorough training in logic is one of the best means of guarding against that very common error of approaching a case with a preconceived notion as to the nature of the trouble. This leads, and often unconsciously on the part of the physician, to an attempt to make the evidence agree with the conclusion, while logic teaches that no conclusion should be drawn until all the available evidence is in. It also teaches that when the evidence is insufficient to warrant a conclusion, no conclusion should be drawn. This is a point which is often unappreciated

by the physician. It has become so customary for the physician to render an immediate opinion regarding a case, that this is frequently done in a manner entirely unwarranted by the evidence at hand. The scientific physician who is perfectly cognizant of the limitations of our knowledge on the subject before him, will refrain from forming, or at least expressing, such unwarranted conclusions, and at the proper time will not hesitate to say he does not know.

If we may now be permitted to recapitulate briefly those factors which contribute most to the scientific success of the physician, we would say that he must:

1st, have a thorough knowledge of the rules of logic and the theory of reasoning, in order that he may be able to deduce warrantable conclusions from the evidence at hand.

2d, he must train his powers of observation, in order that he may be able to present to his reasoning faculties correct data; and,

3d, he must be familiar with what is known on the subject before him, in order that he may correlate his own observations with the facts presented by others.

In conclusion, while as physicians we may view with a just feeling of pride the rapid advancements which have been made in scientific medicine during the past few years, still we should not forget that when all has been said there is not enough known to warrant anyone in feeling conceited.

FOOD.*

BY J. A. WESENER, PH. C., M. D., CHICAGO.

Any substance that nourishes and sustains the body is a food. There are five great classes—proteids, fats, carbo-hydrates, water and salts. When a product contains all of these in proper proportion, we speak of such as being a perfect food. Milk and eggs are perfect foods for the young, but are wholly unfit for adult life. Probably the most essential element in all food is flavor. It is flavor that appeals to our senses, and through

*Address of the Third Section delivered at the General Meeting of the Illinois State Medical Society, April 30, 1903.

this medium the desire for food becomes intensified. The necessity of food is covered up by the pleasure we receive in satisfying the appetite. In satisfying the needs of nature, we resupply her with the necessary material for the liberation of energy, and the replacement of waste. None of us eat with the fixed idea simply to be nourished, but we eat because we like the taste of the food. Nature has her own subtle ways of making her every act one of pleasure. The food that man consumes is prepared for him by the vegetable and animal kingdoms. He also draws to a limited extent upon the mineral kingdom. The plant is the medium or storehouse for him. She is nourished by the air, sun and earth, takes unto herself simple elements, and builds them up into complex bodies. Man lives on the plant and builds her products up into still more complex ones, and finally he gives back his waste products to mother earth again in a simpler form. In this way a balance of the conservation of energy is retained. We may rob, but we also must pay. It is not so long ago since man was first able to imitate the works done in nature's laboratory, and to-day we all know how large has grown the field of organic chemistry.

The preparation of food fit for the action of the digestive juices is very important. Cooking produces a great many changes; starches are gelatinized by the breaking of the cellulose; the insoluble collagen in proteids is converted into the soluble gelatine, the fibers are loosened by the action of the steam, and they become more accessible to the gastric and other digestive juices. Vegetables such as peas, beans and lentils are made more digestible by prolonged cooking. Green vegetables are more digestible than the dried product. Now that we have barely touched upon the necessities of cooking, we will see what changes take place during digestion. The processes of digestion are very complex. We have mastered some of the major points, but yet we have a large and unexplored field here. In masticating food, the ptyaline of the saliva and the amyllopsin of the pancreatic juice act on the starches, changing them into malto-dextrine and maltose. Cane sugar is changed by the invertin ferment into grape

sugar and levulose. The proteids, by the action of the hydrochloric acid and pepsin, are split into smaller molecules called proteoses and peptones. The protolytic action is continued in the small intestine. The trypsin acting in an alkaline medium is much more powerful than the pepsin digestion, and in the case of the latter leucin and tyrosin are some of the end product's formed. Some of the experimenters of late believe that leucin and tyrosin in small amounts can be produced by the pepsin, but it is thought that in such cases the presence of these bodies can only be accounted for by the admixture of some ferment of the trypsin type. The fats are changed by the steapsin ferment and are emulsified and saponified. The bile does not seem to play a very important role in the digestion of fats. It dissolves the fatty acids, and aids in the absorption of the fat. We see from this that its use in digestion is very limited. The process so far is simply an effort on the part of nature to prepare food for its use. Insoluble matter is made soluble, the soluble matter split into simpler bodies, and in this way all the food stuffs are made dialyzable. To-day the term dialysis refers to the size of the molecules; starch and albumin do not osmose through a membrane because their molecule is too large. Peptones and sugar, their molecule being much smaller, dialyze readily.

Absorption takes place through the portal capillaries and the lymphatic vessels. The changes that here take place are not only simply physical, but also chemical. The substance passes through living cells, which have the power of selecting and changing substances that come in contact with them. The grape sugar is taken up by the blood and stored in the liver as glycogen for a reserve and for future use of the body. It leaves the hepatic vein again as grape sugar. The peptones are converted by the epithelium into native or natural proteids, and enter the blood as serum albumin and serum globulin. The peptones being poisonous are in this way changed from harmful bodies to harmless and useful ones. These bodies are now utilized by the cells for the formation of protoplasm. The fat is absorbed by the lymphatics, the emulsified unchanged, the sapon-

ified in its passage through is again converted into a neutral and therefore a useful fat. It is then emptied by the thoracic duct into the blood, and stored up in the tissues for future use.

All of the above processes are essential for the liberation of energy and work, and therefore when we speak of being nourished, we also must understand that this means energy, and this in return means work.

Food in the digested state could be spoken of as physiologically unsaturated, that is, the molecules have been changed in such a manner so that the cell can take up these unsaturated food stuffs and build up into its own economy, to saturated compounds, thereby transforming beef serum into human serum, beef fat into human fat, and vegetable starch into animal starch.

Of the three proximate principles, the proteids stand first, for the reason that this class furnishes the building material necessary to all life functions. Every vital or chemical change in the body is due to some nitrogen body. Therefore, it would not be amiss to say that this food is the machinery substance. The fats stand second, for they generate the most energy. Whether they in any way combine with proteids and lose their identity is doubtful. The same holds true of the proteids. It is a debatable question whether the proteids are changed into fats. The two schools, Pfluger and Voit, are still fighting this question with the odds in favor of the Pfluger disciples. The carbohydrates stand last, for they have less than half the caloric value of fats. Their food value is equal to that of the proteids. It is argued by some of our experimenters that some of the carbohydrates combine with the proteids, and point as proof of this statement to the gluco-proteids, mucin being a class of this kind. In the liberation of energy, the fats and grape sugar pass through the cells of the different organs, and are oxidized into water and carbon dioxide. The protoplasmic ferments which do the work are also consumed, to a certain extent, in performing this function, and nitrogen compounds, mostly urea, xanthin basis and creatin, are formed. Urea, probably being the end product of simple albumen, xanthin basis the end product of

nucleins, and creatin the end product of muscle albumen. There are no vital changes going on in the blood; all of these take place in the cells, and the three most important processes going on continually are oxidation, reduction and hydrolysis.

ADULTERATION.

Now that we have briefly considered the way in which foods are utilized by the body, it will next be necessary to consider the purity and wholesomeness of food stuffs as now found upon the market. In opening this door of investigation, I feel very much like the orthodox minister. It is better to believe and to swallow it all than to lift the cover and know it all. In this age of commercial strife, with all of its keen competition, there is a determined effort made to underbid the competitor, and this can only be done by cheapening the article, which usually means adulterating it. It is true, we have laws regulating the sale of foods, but these do not always reach the case, nor catch the offender. One of the difficulties is the lack of uniformity of the rulings in the different states. The manufacturer is obliged to compound his products to fit the law in each state that has a pure food law. What would hold good in Illinois might not pass in Minnesota.

The greatest offense committed in allowing adulteration is in humbugging the public. If we could have an uniform law to cover all of the states, it would not only then make the law more effective, but would also suit the manufacturer better, and he would then be more willing to conform to the pure standard. But laws are not always passed to further the best interests of the public. I mention here the oleomargarine law, which was passed by the last Congress. Anyone who has not read this enactment should do so. This measure is nothing more than a cut-throat law, its main object being to kill the oleomargarine industry, and thereby satisfy the dairy farmers. It says that butter made from milk may or may not be colored, that oleomargarine made from beef fat, lard, vegetable oil and milk must not be colored, otherwise a tax of ten cents a pound must be paid. In the event a natural color is obtained from the ingre-

dients used, then the usual tax of one-quarter of one cent a pound is assessed. But if the commissioner rules that such a color is unnatural, and levies the tax of ten cents a pound, his ruling is final. I believe that when man imitates nature, and at the same time cheapens the product, man should receive the benefit thereof. This law has hurt all of us, the laboring man in particular. We are now obliged to buy creamery butter and pay the fancy price for it, and this price will continue to increase, for the reason that the cold storage crowd will simply buy up all of the dairy product, and hold it back from the trade until the price is high enough to allow them to color the butterine and sell it in competition with creamery butter.

It has been demonstrated by the highest authorities that butterine is just as wholesome as the dairy product, just as digestible and fills the bill for man's economy in every particular. It is made under the most hygienic conditions and the better grades from the very finest tried-out beef and hog fat. Everyone of us here ought to protest against such a measure. The law simply should rule that butterine should never be sold as dairy butter. When butterine is mixed with butter, this is an adulteration, and should be prohibited. There are a great many cases of sophistication with these products. The honest farmer is often the worst offender. He will bring to your back door all kinds of high grade creamery butter at from one to two cents a pound cheaper than what you pay your grocer. You will probably find on close investigation that you are buying process butter, which is nothing more than old rancid butter worked over. I also know of a case where a rich dairy farmer sold butterine to a few of his very select customers under the name of a high grade creamery butter.

We might ask ourselves what is absolutely pure that we eat. The answer would be, flour, cereals, meat, and fresh vegetables. I do not believe there is one pound of adulterated patent flour in Chicago, and I am just as certain that there is not one pound of pure maple syrup in Chicago. Speaking of maple syrup calls to mind a good story.

A friend sent over some maple sugar obtained from a Vermont farmer, almost white in color; this, of course, was the genuine article, although we must say that we never saw maple sugar quite so pale before. At that time the State chemist informed us that Vermont trees had not produced sap for two years, due to neglect on part of the farmers. Still the factories in Vermont were turning out the usual yearly supply of the famous old brand. The sap was obtained from Ohio, and, as the compounder of whiskey names it, rectified in Vermont. Pure honey is quite scarce, unless you can obtain your supply from your honest farmer. In that event it would be well to learn if your man has not fed the bees glucose, or even mixed the two. There are very fine imitations on the market. In the quick lunch counter establishments, you will not only get your honey, but also the comb with it, all of which is made from paraffin, run into molds, and the combshaped mass filled with glucose and a little honey. There is now on the market an artificial honey, flavored, which is a synthetic product. This sells for about \$10.00 a pound. But the price is not high considering that fifteen drops added to enough glucose will make about one barrel of the so-called genuine article. We have read a good deal about flour adulterations, and have followed with interest the investigations made on this subject by the special commissioners of the United States government. Corn flour, clay, alum, baryta, and other products were to be found. Since the Leiter wheat deal and the passing of the Towny bill, there have been no adulterations of high grade flours. At the laboratory we examine about a dozen samples daily, and find all of the patent flours to be pure. Rye flour, on the other hand, is always adulterated with low grade wheat flour, known in the milling trade as red dog. And this suggests the sausage question.

Meat is meat, but whether it is horse or cow is the question. Ground meats and sausages offer the only opportunity for this deception. The biological test used to differentiate human blood from that of other animals would be a very effective test in classifying all meat substances. A whole

book could be written on the subject of milk. The sale of the product should be more carefully regulated than what it is, and the rules of enforcement much more rigidly applied. Our children, the coming generation, the people who are to continue the work of their forefathers, their health and their work depend, to a large extent, upon the purity of this supply, for man can only develop both mentally and physically when his food supply is properly adapted to his needs. Watered milk is the most common adulteration, preservative next, and lastly, the substitution of steamed lard to replace the butter fat.

Of preservatives used, formalin is the most harmful. It is a powerful irritant to the gastro-intestinal tract; it acts on the proteids of the milk, making them indigestible, and therefore of no utility to the body.

This paper would not be complete unless we furnished the spice. Spices are only pure when you buy the whole article, or pay the best price for the ground material. The most common adulterants are sand, ground cocoanut shells, ground olive stones, ground cracker crumbs, and corn flour.

DIET AND FOOD VALUE.

Half of the struggle of life is a struggle for food, and by food we mean proper food. A well-fed individual, whose nutrition is complete, can do a big day's work, and a poorly fed man does a small day's work with difficulty. The people should be educated to be able to choose food according to its nutritive value, and by so doing they will soon learn what nourishes and sustains the body best. The experiment stations have done valuable work on this question, but the work has not been far-reaching enough. There are several reasons why this education has not met with all of the success that the work deserves. The experiments are not treated in a simple and comprehensive enough manner for the ordinary reader's mind. The publication of same is too limited. The experimenters are carried away too much with actual value at the cost of total disregard for the esthetical side of food. We are told how to cheapen our rations, but we are not told how to make them palatable at the same time. It seems to me that before we

will take up seriously this phase of the question, it will be necessary to combine the cooking school with the laboratory of nutrition. The farmer has received inestimable assistance from the agricultural stations. He now knows how to feed his cow properly, and in return for his trouble get the full yield of milk. It is true that we cannot expect a Jersey cow to give as much milk as is given by the Holstein, nor can we expect by correct or even forced feeding the milk of the Holstein to be as rich as that of the Jersey. You cannot by feeding change the inherent law of breed.

Today, if the stock-raiser expects to make a profit on his beef, he is obliged to follow the rules of scientific feeding.

To make man understand the value of these experiments as related to himself, it will be necessary to approach the subject for him from an entirely new point of view. Man is the highest of all beings, and therefore his tastes are the most developed, and the most difficult to satisfy. The first thing that appeals to all of us in a food is its taste. It must have desired aroma; it must have desired flavor; therefore, let us begin our teaching of nutritional value by first satisfying the taste. It does not make any difference how much protein a certain food stuff must have; this may appeal to the reason, but it will not be eaten until the stuff is made palatable. Cooking is not only a science, but also an art. Man must have both, if you wish to satisfy him fully. The art of cooking properly is a subject that will always be interesting, because it will always be new. We hear of a dish being wholesome, and at the same time flavorless; or, again, a good raw product, cooked into a dish not fit for the heathen to eat. A cook today should be educated the same as is the brewer and distiller. Brewing and distilling is less complicated, for the reason that the finished products do not present the large variety. One cook will broil a choice Porterhouse steak in such a manner you do not recognize it, conforming to so much sole leather; or another cook will take an inferior cut of meat and with knowledge of time, temperature and flavor, prepare a dish most acceptable. The flavors today are developed

to a very large extent by the manufacturers. Meat is not suited to our tastes unless it has been stored several weeks in a cooler. Thereby certain chemical changes take place, and these bring out certain aromatics which are very much desired by all of us. The meat, by this process, also becomes more tender and less stringy. Ham and bacon are also given a special treatment to bring out the desired smoked flavor. The cheese industry is one of bacteriological control. It is a simple matter to make any of the special brands by analyzing the raw product as to the amount of fat and protein; then taking a cheese of such a composition which is flavorless, and inoculating it with the brand which you wish to imitate. The flavor of good butter depends upon bacteria, and even the flavor of bread is due to the action of the yeast on the sugar and gluten in the flour. Flour does not contain the bread flavor in its natural state, and this is readily demonstrated in biscuits which are made with baking powder.

In arranging a well balanced diet, it is necessary to take a great many factors into consideration. A man who labors must be fed more plentifully than one who leads a sedentary life. The laborer burns up more and, hence, must consume more in order to replace the waste. Such an individual enjoys the act of eating. His food agrees with him; it stimulates him; he is at peace with himself and with the world. The man of sedentary habits, on the other hand, should have a most limited diet, and this, as a rule, disagrees with him. He does not expend the necessary energy to bring about complete oxidation, and these intermediate products heap up in the blood and poison his general health. Such an individual may have all that money can give, but he is not at peace with himself and with the world. An individual of average weight should take daily about four ounces of protein, three and a half ounces of fat, and ten ounces of carbohydrates, but it is difficult, as has already been stated, to lay down any fixed and fast rules. Correct diet is important, and in children we see this so often neglected. The bottle-fed infant that develops rickets, due to fat starvation; or, in another, that develops scor-

butus, due to continuous feeding of sterilized milk. We find such malnutrition in most of the young animals of the lion type that are raised at Lincoln Park, and these usually die of rickets. The mountain lions are the most affected. Litter after litter born never reach adult life. In such cases the milk is a factor, but there is also another, and that is the factor of domesticating. Still there has been a great deal of correction made even with these wild animals by correcting their diet. To make a diet suitable, it must be arranged as to climate, occupation, and according to the individual temperament. In a tropical country, fats are not well borne, for they generate too much heat. Fruits, meats, vegetables and bread stuffs would be proper there. In the North, fats would furnish the best food value, having two and one-quarter times as many heat units as either the starches, sugar or proteids. The individual, of his own accord, providing he is in good health, will choose about the right rations, whether he be in the frigid zone or in the torrid zone.

But when it comes to prescribe a diet to suit the temperament of an individual, the physician is in a dilemma. To hit upon the correct food for such a subject, it will be necessary to study the case before you. If the patient is in a highly nervous state, irritable, quick tempered, cranky, hypersensitive, you are probably dealing with what we might call an acid condition. Such individuals cannot eat fruits, they disagree, causing sour eructation, flatulence, and so forth. They usually suffer from an excess of hydrochloric acid or acids of fermentation. Proteids and dextrinized carbohydrates, and certain vegetables, seem to act best in their case. They often develop very severe acid toxemia from the eating of fruits. I know of one case of this nature. She was very fond of strawberries, but they always disagreed with her. After the eating of same, urticaria usually developed, and when the attack was very bad, continued polyuria, with marked prostration, and, finally, diarrhea, after which the symptoms would subside. This class is most difficult to handle. There are usually underlying causes. Hereditary temperament, highly artistic nature, abnormal striving to become great, and to achieve

only the highest. Such individuals never rest; their whole economy is out of tune and out of harmony. How, then, can we expect to feed them rationally? You meet a condition here that is similar in many respects as was met with in the case of the mountain lion. You cannot tame him, nor domesticate him, and before you will get any diet to agree with them, it will be necessary to turn them out to their native haunts, the woods, where everything is at peace, where contentment reigns. These hypnotic influences will soon have the desired effects on such cases, and you will find that any sort of a diet will then agree. In giving proteids to these cases, cheese stands at the head. It has the property of combining with large quantities of acid, and at the same time it is not irritating to the inflamed mucous membrane. Furthermore, it does not contain the objectionable decomposition products found in other proteids.

The companion picture of this temperament is the morose, sluggish, melancholic and lassitude type. This is not the acid type, and for that reason is easier to handle, from the diet standpoint. Such cases often are large meat eaters, or if not, the meat they consume does not agree with them. Their urine always shows a high percentage of indican. By omitting objectionable proteids, such as meats, and give in place milk and vegetable proteids, carbohydrates and fruits, the condition is usually readily corrected. Cheese here, again, is the best proteid to use. It is generally accepted that cheese is very difficult to digest, when, as a matter of fact, the opposite is true. The bacteria not only flavor, but also partially digest, it. The reason this idea has taken such deep root is because the flavors are very strong, and individuals who suffer more or less from eructations will naturally belch up the flavor. This is well demonstrated, as after eating onions. We might ask ourselves the question, that if cheese is so difficult to digest, why the Lord should have chosen this proteid as the one best adapted to give us our first start in life?

Now, as to an exaggerated diet. Biologically, man's stomach is intended for a mixed diet. We have reached this state through

slow stages of evolution, and therefore it is impossible to live exclusively upon vegetables, or exclusively upon meat, and expect to prosper physiologically. On a mixed diet a man liberates daily from the lungs 280 grams of carbon dioxide, and during the same time eliminates by the kidneys 15 to 18 grams of nitrogen. A strictly vegetable diet does not supply enough nitrogen, and even if to the diet a good supply of beans, peas and lentils is added to bring up the nitrogen. It has been shown that these proteids are not as easily digested and, further, that the legumins always cause more or less digestive derangement. If we were to live on potatoes exclusively, we would require ten pounds daily, in order to furnish enough nitrogen. If meat alone were eaten, it would require five pounds daily, in order to furnish the necessary carbon. The vegetarians are not true to name. They always eat eggs and milk, and in that way make up for the lack of nitrogen. The strictly vegetarians have not the endurance, nor can they endure fatigue as well as those living on a mixed diet. They are also always anemic, unless they choose quite freely of such vegetables which are rich in iron, and, finally, such cases have a tendency of becoming old while still young. Atheromatous conditions of the blood vessels develop early, due to the excess of mineral salts in their food supply.

An exclusive meat diet is just as irrational, and is just as injurious to the body. Such diseases as gout and Bright's disease would result. The rational diet, then, is the mixed one. It is always best to adopt a happy medium in this life; by so doing you will get more out of it, and probably live longer.

Possibly one of the most dominant factors that man must contend with after reaching adult life is being over-nourished. He has learned to eat heartily while young, for the growing need of his body, and keeps up this habit after reaching maturity. We all eat too much, excepting those who do manual labor. There are many just reasons for this. First, custom of eating three times daily, wanting to please those who took the trouble to prepare all of the good things. Second, social functions connected with same. The old adage holds true that if you want to get

acquainted with your man, buy him a good dinner. Third, over-eating creates abnormal craving for food. Like one who becomes intoxicated on taking his first drink of whisky; his tissues are not used to such stimulation, and naturally the nervous system responds readily. After a time, however, it will always require more and more of the product to produce the same result that the first glass produced. Food effects one very similarly. We all have a tendency to overload our stomachs long after we have satisfied the actual needs of the body. We can educate ourselves as to what is the proper amount to eat, precisely the same as we have educated ourselves in other vital matters.

In conclusion, man must learn to feed himself rationally. He exemplifies this fully in the way he feeds his horse or cow. He has adapted rations that are correct for their economy. He knows all this, and yet he fails to feed himself correctly. Social obligations, habits, and customs prevent him from carrying out this principle.

When we eat to satisfy the needs of the body and not the appetite, one half of the ills "which flesh is heir to will dissolve into thin air," and our mental attitude will balance in the scale of a normal physical condition.

THE RENAISSANCE.*

BY J. L. WIGGINS, M. D., EAST ST. LOUIS.

It is not my purpose to give a historical sketch of the awakening, which at best would consist of a compilation of facts, the common property of all. Rather do I wish to direct attention to the work of that large and ever increasing class throughout our country who are known as occasional operators. That compliments and criticism herein contained may not be construed as presumption on my part, I will at the threshold plead guilty to all the sins of omission and commission which may be laid at their door. While pleading guilty to much that is open to criticism, the higher requirements of the present may be accentuated by calling your attention to the

fact that it is now hardly twenty years since one of the most skilled surgeons of the middle West, in a populous city, attended by men of national reputations, with conditions properly recognized, was permitted to die from effect of perforated Gall Bladder without a thought being given by his eminent attendants of possible relief through operative procedure. You will agree that the Court House Surgeon of today would be condemned were he to pursue like course of inaction. This incident will serve to fix in our minds the rapid strides made during this period. It will also aid in realizing that the responsibilities are not now as it was then confined to the few, but rests with increasing weight upon the many. This being the case, is it not well that we, considering the conditions which have demanded more extended and comprehensive knowledge fully digested and appropriated by those who must of necessity first see and decide the policy to be pursued in surgical cases, and upon whose judgment good or bad, the health, happiness, or life of the unfortunates in every community depend, are pursuing such a course in their means of education as to secure the best results?

Antisepsis may be considered as the dawn of this new era in surgery; not its discovery, but its general adoption; it opened up new fields for investigation and permitted interference in cases heretofore considered inoperable, or as lying entirely within the domain of internal medicine. With anesthesia and antiseptics, cases of minor importance were attended at home by the general practitioner, who, after several happy results was no wise loth to be called a surgeon. Our society meetings were better attended; discussions more general; journals multiplied; contributions poured in from unusual and unexpected sources; men had accomplished something of which they were proud; the so called cross-road-surgeon made his debut. That the cross-road-surgeon was an improvement upon his predecessor, or upon his former self, none will deny; that he has done much good—also much harm—there can be no reasonable doubt.

Evolution, with the survival of the fittest, is exemplified in vocations as well as species. In many communities the better equipped at-

* Address delivered before the Surgical Section of the Illinois State Medical Society, Chicago, April 29, 1903.

tained a higher plane; this insured more opportunities, more experience and better work, with the very laudable desire for further improvement; this individual is the long looked for, much desired court-house-surgeon.

Antisepsis had reached its full majority before it was adopted by the general practitioner; being adopted virtues of miraculous nature, were accorded it; its logical uses were discounted by its illogical abuses; its growth was less rapid than its decline.

About the time antiseptics reached its zenith, we were confronted with a new, unknown factor; this "new creature with long hair" demanded recognition, and in spite of our prejudice, soon became indispensable.

Antisepsis assumed its proper station, and asepsis emphasized and exemplified in this "new creature," made Hospitals possible where formerly they were unthought of. With this picture before us, one would suppose that the dream of the past had been realized; a condition, wherein no county seat, but possessed a surgeon, competent to diagnose with reasonable assurance, and operate with skill. If our judgment is influenced by reputations, dependent on the opinion of the laity, or if our horizon is restricted and opportunities for observation limited to those only who occupy the medium plane, we will find many such demigods to worship. If we deem one a surgeon who has nerve enough to cut, and skill enough to suture, we will be satisfied. If however, we enter into a careful analysis, following the lines of laborious thought which led to obscure or indefinite conclusions, before permitting conscientious action, if we in many instances, watch the painful indecision at each operative step, we will begin to understand that there is something requisite along surgical lines which was not mastered, or if so, ignored.

We have a right to assume that the medical profession is candid in its reiterated assertion, that anatomy is the foundation of medicine. It is presumed that a knowledge of what an organ is, will be supported by a knowledge of what an organ does, and with the foregoing information, one can readily recognize any departure from the normal.

This is undisputably true. A thorough working knowledge of anatomy and pathology

is indispensable to good surgery. Examine if you wish the special acquirements of the few in this or any other land who lead, educate, originate, or perfect methods in diagnosis or technique. Even the casual observer will discern the fact that it rests upon a foundation more substantial than luck. Investigation will disclose they did not in the first instance possess special natural ability that made their selection a prophecy; or is it a fact that environments, except as molded by the individual, placed them in a position of exceptional opportunities? On the contrary, in many cases we will find that natural individual idiosyncrasies or surroundings, required mastering in addition to those of science. The experience of ages, is that there is no short cut to enduring success. In the work of these masters we see the finished product only. It is well that we who are desirous of occupying a position of scientific respectability, understand that our only means of perfecting ourselves, is in following that path which has during the past or present led to success; that we must devote more time, and devote that time more intelligently, to mastering anatomy and pathology; that our greatest benefit will not accrue from observing master surgery in the operating room unless we can interpret the theories in logical sequence which concluded these procedures necessary; this can only be understood by a thorough knowledge of every tissue of the body; a theoretical understanding is not sufficient. Illustrations of deficiency in individuals will occur to many of us as we recall intelligent discussions on a given subject by men who proved helpless at the bedside.

Anatomy can only be learned on the cadaver. Pathology may be studied in theory, but lessons which impress must find their teacher in Post-mortems and in the living subject. Sporadic and disconnected efforts in mastering these sciences are ineffective; to be of practical service, they must be so photographed on the brain as to be a part of the individual. Not only must the eye recognize, but the touch must reveal any radical departures from the normal; this necessitates yearly pilgrimage to the dissecting rooms, and careful and intelligent post-mortems.

If one were to base an opinion upon existing conditions, taking the profession en masse, the conclusion reached would be that anatomy and its associated sciences were not the foundation, but only a conventional decoration; a necessity for graduation, but not required in every day life in practicing the healing art. As an example of the correctness of this criticism, I formulated six questions, which I submitted to six of my colleagues who occupy an enviable position in the profession in their respective neighborhoods; all have done surgical work of a higher order; the questions were formulated with the double purpose of testing, first, their practical, second, their technical knowledge.

Question 1. Abdominal Examination—Why do the abdominal muscles become instantly rigid when the skin is irritated? What practical deduction should be drawn from this information?

2. Structural arrangement of intestinal coats at ileo-cecal valve, with logical conclusions as to functional interference, result of adhesions or exudates.

3. If the gray nervous matter in middle sensory-motor area cerebral cortex were destroyed, what portion of the body would be affected? Through what conducting tract of cerebro-spinal axis are these impulses conveyed?

4. Draw a diagram of the normal position of right kidney; make horizontal and perpendicular lines which would serve as a guide in proving correctness direction of pressure in searching for organ proper position.

5. Are the intestines contained within or are they without the peritoneum sac? Why is it that some portions of intestines are covered, and some only partially covered with peritoneum?

6. What is the law of projectiles as applied to nerve impulses as represented by reflex pain?

Answer to Question 1. One gave correct explanation. One conclusion correct without understanding its cause. The balance had not given the subject any thought, but would look it up.

2. All understood clinical symptoms result of adhesions; none had investigated structural arrangement of intestinal coats

which caused valve formation, and the direct influences these adhesions had on its proper function.

3. The answers to this question would not pass one in an examination before any anatomical board.

4. Three had performed nephrorrhaphy; one was familiar with landmarks in every detail; one fairly so; three directed their pressure so far toward median line as to be at least two inches internal to that portion of kidney which lies below thoracic cage; one admitted complete ignorance.

5. Familiarity with reflections of parietal peritoneum, and the embryological formation and position of gastro-intestinal tract which permitted surrounding of tube with peritoneum, but leaving it without the sac; either forgotten, or not properly understood.

6. Results understood; explanation as to the cause unsatisfactory.

SOME OBSERVATIONS ON IODOPHILIA.*

BY ADOLPH GEHRMANN, M. D., CHICAGO.
Columbus Medical Laboratory

When white blood cells or pus cells from various sources are treated with iodine—iodide of potassium solutions—a variable effect as regards the staining by iodine will be seen. Three distinct conditions will be encountered. First, the cells may be stained indifferently that is they will appear yellow. Second, the extra nuclear protoplasm will show granules or masses that have stained brown. Third, the nucleus may be the part particularly involved and it will then appear dark brown. This phenomenon of iodine staining as seen in specimens from the circulating blood has received considerable study and has a fairly established place as a clinical laboratory method. It should be looked for as a routine part of blood examinations and will be found of value as an aid in differential diagnosis. What is especially desired to present here is the relation of nuclein and amyloid bodies to the production of iodophilia when injected into animals and some points as re-

* Read the meeting of the Illinois State Medical Association at Chicago, April 30, 1903.

gards the staining of pus cells with iodine.

From a review of recorded information it is shown that the following facts have been established as regards the presence of these brown stained masses in white blood cells taken from the circulation.

First—It is never found in the normal leucocytes.

Second—It appears only when leucocytosis is present.

Third—It is not always present in inflammatory leucocytosis.

Fourth—From an experimental standpoint it is possible to produce the reaction. *a.* By the injection of grape sugar or peptone into the circulation or into the peritoneal cavity.

b. By experimentally produced suppuration.

Fifth—As regards its presence in disease it is most constantly found in connection with suppuration, diabetes and severe anaemias. Loche and Cabot in an extended study of 432 cases conclude that iodophilia is most marked in: (a) Infection with pyogenic organisms, either local or general; (b) In toxæmias of bacterial origin; (c) In nonbacterial toxæmia, uræmia; (d) In disturbances of respiration; (e) In anaemia primary and secondary.

From this it will appear that the range of findings is quite large.

The reaction is evidenced by the presence of brown staining masses when blood or smears of pus are treated with the following:

Iodine	1
Potassium iodide	3
Water	100
Acacia gum, q. s.	

The recognition of the reaction is credited to Ehrlich who observed both intra and extra cellular brown staining masses in blood preparations. Kaminer has divided the reaction into three degrees of intensity that have been acceptable to subsequent observers.

Degree I.—Diffuse staining. The protoplasm is stained a diffuse reddish hue.

Degree II.—Circumscribed staining. Masses that are distinctly outlined and stained brown are seen in the extranuclear parts of the cells.

Degree III.—Metamorphosis. The entire

protoplasm is filled with brown stained masses while the nucleus remains clear. Extra cellular masses are also present.

Several theories have been advanced as to the cause of this peculiar change in the white blood cells. Ehrlich considered the substance as glycogen. Czerney thought the reaction due to an amyloid body and that it was formed within organs and was carried into the general circulation.

Goldberger and Weiss consider the reaction due to peptone, this from their clinical observations. Kaminer, from his experiments, concludes that the action of toxins is the cause. That it is a degeneration product formed in the leucocytes and that it is not derived from the exterior.

The various clinical and experimental data upon which these theories are based are not sufficiently clear to decide the nature and cause of iodophilia. The entire subject therefore will require considerable observation before it is understood. In view of these facts it seemed that a closer study would be of interest.

NUCLEIN AND IODOPHILIA.

Several years ago we made some experiments to show the effect of nuclein injections upon the numbers of white blood cells. In these leucocytosis was easily obtained. This form of leucocytosis was therefore again produced to see if the iodine reaction would accompany it; along this line Kaminer has already shown that simple leucocytosis without fever does not give iodophilia. In his experiments he employed spermin injections. In the present experiments both animal and yeast nucleins were used and it was thought that repeated injections might induce the reaction. In this regard the experiment failed. Guinea pigs were injected daily with 1 cubic centimeter of nuclein solution for a period of two weeks. Blood films were prepared at intervals during this period and during the next few days after the last injection. Although a leucocytosis was observed amounting to between 20,000 and 30,000 cells to the cubic millimeter there was no evidence of cells being present that were specially stained by iodine.

AMYLOID BODIES AND IODOPHILIA.

In this part of the work agar was used because as a representative substance it seemed to conform fairly well to the requirements. Agar is a vegetable substance having the composition $C^{11}H^{18}O^{10}$ and has some resemblance to dextrin. It reduces copper solutions to a slight degree and when brought into intimate contact with iodine it gives a brown color. With an excess of iodine this may be nearly black. The reaction is most distinct when pieces of agar are soaked in the iodine gum or when a watery percentage is melted and mixed with it. It does not melt at ordinary temperatures. In order to try the effect of this substance rabbits were injected with a one-fourth per cent solution intravenously. About 1 cubic centimeter was injected daily rotating from one vein to another. In order to accomplish this the solution was held at a temperature of 45° to 50° C.

The examination of the blood of these rabbits showed the reaction in a mild degree even after 24 hours, not all of the leucocytes reacted. Later practically every polynuclear cell showed some reaction. The degree of reaction was that in which the stain was taken by extranuclear particles with little diffuse staining. Extra cellular masses were not in evidence. The treatment of the animals did not disturb their general condition, there was no fever, and only a slight leucocytosis, not over 10,000 per cubic millimeter.

This experiment was extended by injecting 10 cubic centimeters of melted 1 per cent agar solution into the peritoneal cavity of a rabbit. No general disturbance was noticed. Twenty-four hours later a small amount of fluid was withdrawn from the cavity with a large aspirating needle. This peritoneal fluid showed numerous leucocytes mostly lymphocytes. A slight amount of iodophilia was present and there were numerous granules between the cells.

In regard to this result the question as to the toxic action of the agar must be considered. As it did not give rise to fever or depression there is no immediate evidence that it acted as such. Was it taken up by the white cells? In favor of this assumption there are the peculiar properties of agar and

the prompt appearance of a reaction within the cells such as it will give.

THE IODINE REACTION IN GENERAL.

For sometime it has been of interest to me to test all manner of specimens containing pus cells with the iodine gum. Pus from acute abscesses, gonorrhoea, urine, sputum, empyema and affusions were examined. It was soon apparent that these cells reacted differently from those in the circulating blood. As a general observation there is little reaction in the protoplasm of pus cells while the nucleus of polynuclear cells and often entire small lymphocytes are very deeply stained. Iodine staining does not appear as frequently as one would expect. In the pus from abscesses and in gonorrhoea, both acute and later in mixed infections, this nuclear staining is very prominent. In sputum it is rare to find iodine stained cells. In the urine there is much variation and here it was shown, by general staining and cultures, that its presence was associated with pus coccus infection. This was also observed to be the case in material from other sources. The reason for this nuclear staining of cells outside of the circulation may be taken as evidence of degenerative changes and may help to distinguish true pus cells from leucocytes.

Besides all clinical relations the nature and cause of the iodine staining substance is of greatest interest. That it is due to a substance related to carbohydrates is shown by the staining and from the fact that such substances are present in pus. Solomon has shown the presence of glycogen in pus cells. Hoppe-Seyler says, "The presence of glycogen can be shown by the iodine reaction provided this is differentiated from that due to amyloid. As the latter is quite insoluble in water and is not converted into sugar when boiled with dilute acids this is not difficult."

The origin of the glycogen under such circumstances may be possible from two directions. One the absorption of circulating carbohydrates as glycogen or the conversion of grape sugar into glycogen the other the formation of the substance from albumins. On the first point we have the general knowledge of sugar conversion into glycogen and its appearance as granules in the liver cells and with this the evidence of the actual presence

of glycogen under some circumstances in the blood and tissues. On the second point there is the evidence of Mering who was able to show that at times glycogen would be formed from proteids.

It does not appear to me that the substance is amyloid because it does not stain like it nor does it have the sharply defined appearance of amyloid. Browicz who reports an elaborate study as to the formation of amyloid concludes that it is due to the conversion of the material of red blood cells into this lardaceous substance. If his observations are true it would appear difficult for the amyloid body to come into existence in cells as rapidly as is often noticed. That oxidation has something to do with this subject is shown by the presence of iodophilia in narcosis and disturbed respiration. I am inclined to think that this will be found a very important factor in the production of these bodies.

It would seem that we should agree with the earlier observations that the iodine staining substances is of the nature of glycogen. A further study of the variability of the staining of cells with iodine will be of value and will help to explain the phenomenon. Decreased oxidation either direct or indirect has an important bearing on the occurrence of the reaction.

The test should be more generally used and will be of value in connection with other findings in differential diagnosis.

References.

- Ehrlich, Zeits of Klin Med. 1882 Band.
 Ehrlich and Lazarus, Die Anaemie.
 Gabritschewsky, Archiv of experimentelle Path u Thep Bd. XXXI.
 Goldberger and Weiss, Wien Klin Woch, 1897, No. 25.
 Czerney, Archiv ff Klinis Med. Bd. LIII.
 Strauss, Charite-Annalen Bd. XXIII.
 Kaminer, Berlin Klinis Wochens 1899 No. 6.
 Loche and Cabot, Jour Med. Research 1902. January.
 Wiener Klinis Wochens 1902, Jan. 2-9.
 Kaminer, Deutsche Med. Wochens 1902, April 13.
 Hoppe-Seyler, Chemical Analysis 1893.

Discussion.

W. C. Bowers, of Decatur: Doctor, do you think it especially useful in the hands of the common practitioner for making a diagnosis of any diseases?

Dr. Gehrmann: It will help very much to locate a suppurating process, or an abscess in connection with the other things you have in a case; and if you can rule out such things as

diabetes, and the effect of a surgical operation, for instance, or disturbed respiration, when the heart is not compensating, you will be quite certain there is pus somewhere. In this report which I have referred to, and which is particularly interesting, as many as four hundred cases were examined by them, and the results carefully noted. It seems that even a small abscess would show the reaction, such as a boil on the finger. That is the special value that the thing has as a means of clinical diagnosis, but of course as it occurs in some other conditions you will have to stand ready to rule out those conditions before you can say that it is useful.

The Chairman: Is that all in the way of discussion of the paper? Is there anything you wish to say in addition, Dr. Gehrmann?

Dr. Gehrmann: I have nothing to add only that one of the most interesting points of the whole matter is that the cells outside of the body stain, while they do not stain in the circulating blood. Whether it is because of some special change that has taken place in the nucleus is an open question. It is rather a peculiar circumstance that it should stand out in one case, and not in another case. Of course there is a possibility that life and death of the cell may have something to do with it.

PELVIC ABSCESS.*

J. A. BAUGHMAN, M. D., NEOGA.

A class of cases among women for which most of us, as general practitioners, have a wholesome dread are those of pelvic inflammation with suppuration.

These cases occur with great frequency in rural practice as can be attested by almost all physicians who have a surgical practice in the country.

The causes of infection are generally puerperal, traumatic, menstrual, neoplastic and excessive and unclean venery.

The route of infection is the Fallopian tubes, the lymphatics and the veins.

The peculiar anatomical structure, defect it almost seems, of the Fallopian tubes, which gives an unobstructed conduit from the outside of the body to the delicate peritoneal cavity, is in the great majority of cases to blame for the pelvic infection.

This has often been proven by the very frequent location of the point of infection and abscess at the back of the broad ligament, the natural position of the fimbriated end of the tube.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

The lymphatics and veins are often the avenues of infection, especially in puerperal and abortion patients, where a wound always exists on the intra-uterine surface and where the blood and lymphatic vessels are greatly enlarged and multiplied on account of the gravid uterus.

It is doubtful whether the gonococcus ever infects through these vessels sufficiently to cause abscess, as its natural habitat is the mucus surfaces.

The tissues most likely to be involved in the suppurative process are the tubes, peritoneum, ovaries, cellular and uterine tissues, in fact the central point of the abscess may be found in or between any of the pelvic tissues; but almost never between the uterus and the bladder.

However, the inflammation may limit itself only to the peritoneum, not involving the deeper cellular tissues and is then not as liable to suppurate, but the differential diagnosis between a pelvic peritonitis and a pelvic cellulitis is so difficult that we seldom attempt it.

A pelvic peritonitis is extremely liable to become a general one and then we have those awful cases that make us seem as babes in the medical world.

Clinically speaking it makes little difference just where the abscess is located until we come to the point of operating and even then we are bound to lose our anatomical landmarks to a greater or less extent, and only know that we have a hard, sometimes doughy or fluctuating mass in the pelvis that likely somewhere has a focal point of pus, but one point in particular we should remember and that is that when the infection first takes place in the peritoneum the abscess may be in the ovary or cellular tissues.

The kinds of infection are septic and specific.

The septic kind means the introduction into the tissues of some of the pus producing microorganisms, generally a streptococcus, at the time of child bearing or abortion. This kind of an infection is generally the most severe and destructive in its career; the signs and symptoms at the beginning often being of an overwhelming character.

By the specific infection is meant the intro-

duction of the gonococcus into these tissues, an infection that is much less violent in its course than the streptococcus invasions. In fact according to our experience when we know that we have a gonorrheal case of this nature we are quite justified in hoping for a favorable termination, independent of surgical interference.

The symptoms of pelvic abscess above all are pain, generally severe, in the pelvis, chill, elevation of temperature, tenderness to the touch of the pelvic organs and quickened bounding pulse.

The intensity of these symptoms often varies somewhat with the virulence of the attack and the location of the pathogenic process.

The temperature and pulse rate at first are high and later when pus has formed they simmer down to what is usual in septicemia.

The color of the skin is a yellow anemic hue, the face is anxious the tongue dry and furred. The thigh may be drawn up on the affected side and the patient usually lies on her back.

The physical signs rapidly follow the subjective symptoms and consist almost wholly of tense abdominal muscles, induration of the pelvic tissues and displacement, most often sideways, of the uterus.

The signs that will help us in our diagnosis we get mostly by digital and bimanual examination. And right here let me say we must think, I say think, every time we make a physical examination of the pelvic organs, scar on our minds the normal condition of these tissues so thoroughly that the instant the eye, so to speak, in the end of our finger sees an abnormality we can recognize it as such.

In this fact, this ability rests, absolutely and wholly our usefulness in cases of this kind.

Teach that index finger of yours the alphabet of the blind book of the pelvis and you have the key to the diagnosis; and without that identical key, books, charts, and all else are as naught.

We have a number of times diagnosed these cases early enough to evacuate a large quantity of serum that had accumulated in the pelvis before the fluid showed any decided

purulent changes. In such cases we were led to believe we had arrested or very materially abbreviated the attack.

One of our chief objects in reading this paper today is to determine what you and I as general practitioners propose to do with these cases where we are not guilty of rail-roading them off to the city.

The expectant treatment may be tolerated where we are certain the patient is rapidly improving but unfortunately these cases are rare; the great majority need sooner or later some form of surgical interference.

The one operation that most of us can do is to reach the pus through the vaginal vault.

The time to do this is as soon as you can satisfy yourself that pus is present in a sufficient quantity to make a target enough to be hit.

It is often possible to locate the pus by means of a long aspirating needle, the needle then serving as a guide in the more extensive operation of evacuation. But we should not wait until the target is too large, until it constitutes about the whole of the abdominal organs for then our marksmanship is seldom needed; it is too late.

Occasionally nature will evacuate such an abscess into some of the hollow viscera but the chances are that in such an event the evacuation will be irregular, seriously injuring the rectum or bladder and producing a very incomplete cure.

The safest way is for us to make the drainage canal in surveyed territory, for nature's ways are often too devious and dangerous to be tolerated.

An opening through the vault of the vagina near the cervix, generally behind, but often at the side of that organ constitutes the starting point of our canal. This may be cut through the mucus membrane by a sharp knife but not deep enough to wound any important structure, when a long, pointed scissors is made to penetrate the deeper tissues into the cavity of the abscess. The instrument is now spread and thus withdrawn tearing a wide opening through which the pus usually runs quite freely.

Some authors teach curetting the cavity and packing with gauze, but my experience leads me to prefer a plain rubber drainage

tube held by a suture. The gauze drainage I consider a nuisance at almost all times and here it is doubly so on account of the difficulty of introduction and retention.

When thrusting the scissors in quest of the abscess the curve of the pelvis must be followed by the point of the instrument or the rectum may be seriously injured.

On the side of the cervix the ureter and uterine vessels are in danger of being wounded and the less cutting we do in this locality the better, the work can all be done by a penetrating and tearing process.

You will find the whole procedure very much easier, especially when the abscess lies high up, if an assistant will, through the abdominal walls, push with his hands the indurated mass well down into the pelvis.

This procedure not only bringing the diseased tissues closer to the operators hands but fixes them firmly, thereby facilitating our manipulations.

The finger should be introduced into the abscess to determine the absence or presence of other cavities in juxta position to the open one. If any are found the digit may be all sufficient to break into it, as the partition is often very thin.

We are taught to wash out these as well as other pus cavities, but to be frank I cannot say that I think it hastens the healing in the least, provided a good drainage is established.

I have seen many large pus sacs in the pleura, the pelvis, the limbs, the spleen and other tissues heal so rapidly without irrigation that I have almost entirely abandoned the irrigation of them.

Most of these cases so treated will get well, absolutely well, some of them are only more or less benefited and join the ranks of our female invalids who run the red gauntlet of the hospitals in quest of their lost health.

OPERATIVE DYSMENORRHEA.*

BY G. KOLISCHER, M. D., CHICAGO.

As a rule there are subsumed under the term dysmenorrhea quite different conditions and their sequelae, all of which have this in common, that extreme discomfort and severe

*Read at 53d Annual Meeting, Chicago, May 30, 1903

pain is noticed immediately before and during menstruation. In this sense, there was distinguished between ovarian tubar, parametrical, peritoneal and uterine dysmenorrhea.

The first three terms serve to express the fact that the symptoms produced by changes at the appendages or at the serosa are increased by the premenstrual and menstrual congestion, while the last one characterizes a condition which arises in the menstruating organ itself. The first three categories as not immediately connected with the process of menstruation, in fact do not deserve the term dysmenorrhea in a strict sense, which name ought to be reserved for these menstrual conditions which are due to certain nervous or mechanic nutritive changes in the uterus proper, and in which always one leading symptom is noticed, that is, the spasmodic painful contractions of the uterine muscle causing the same sensations as actual labor pains.

This latter group shall be the topic of my paper. We call nervous dysmenorrhea the condition which presents the leading symptom of spasmodic contractions, while we are unable to trace any anatomical causes for it, and because the success of a certain treatment points in this direction.

We talk about nutritive dysmenorrhea if the dysmenorrhea is connected with a hypoplastic uterus, or if general anaemia exists. In these cases the flow as a rule, is very scanty and the pain usually subsides after the flow is fully started.

All these categories never call for any operative interference and appropriate treatments are almost uniformly successful. As such, I mention the administration of nervina and hydro therapeutic treatments in nervous cases. The fighting of general anaemia by the very well known methods, the administration of Thure Brandt massage of the back bone, resistance gymnastics, bicycle riding, repeated sounding and hot douches in cases of hypoplasia.

Apostoli's electric method although undoubtedly successful in many of these cases has no advantages over the above mentioned methods but some rather serious objections can be raised against it. At first, it neces-

sitates the destroying or at least the considerable dilating of the hymen in virginal individuals who furnish the majority of patients of this kind. Second, this method is not free from danger, inasmuch as serious infections and inflammations have been observed as sequelae of the application of the electric sound. Only in cases of dysmenorrhea membranacea it might be indicated but this abnormality as a rule, does not cause uterine contractions and pain so that it does not belong to today's discussion.

More serious problems for diagnosis and therapy offers the mechanic dysmenorrhea. The mechanic dysmenorrhoea may either be based on the fact that the internal os is abnormally tight so that it offers a great obstacle to the flow of the menstrual secretion. Of course, an absolute obstruction does not take place but the outflow is not in proportion to the rate at which the blood is extravasated into the uterine cavity.

The consequence is, that blood accumulates inside of the uterine cavity and stimulates the uterine muscle to contractions which are perceived as painful. In other cases, the cervical canal in toto is so narrow or the cervical tissue so rigid that there is not enough room for the congested mucosa so that this impacted mucosa and the consecutive stretching of the cervix starts spasmodic uterine contractions, while on the other hand, the outflow is impaired by this swelling.

In very pronounced cases we actually see the cervical mucosa bulging out of the external os red and swollen, if we examine the cervix during the earliest stages of menstruation. After the menstruation is in full go and the extreme congestion relieved, the pains cease; although there are cases where spasmodic contractions and excruciating pains persist during the whole time of menstruation.

I want to call attention to the fact that it is quite a general erroneous teaching that the mechanic dysmenorrhea is due to extreme ante-flexion. That is absolutely wrong. All the above mentioned conditions are just as frequently observed in retroflected or absolutely straight uteri. It is furthermore a matter of experience that, when the menstrual congestion begins the angle between body and

cervix becomes straightened out. Even extreme ante-flexion at a very sharp angle does not cause any dysmenorrhea if the cervix and mucosa is normal. An abnormal tightness of the external os does not produce dysmenorrhea, as is proven by numerous clinical experiences.

Diagnosis of one of the above mentioned mechanic causes of dysmenorrhea is established by sounding the cervix. It is very important, however, to seize the anterior lip in a tenaculum and to pull it down so that the sound won't be caught in the mucosa folds.

If a sound whose point is 2 m.m. thick cannot be passed, mechanic obstruction is present. I want to state expressly that this examination can also be carried out in virginal individuals without interfering with the integrity of the hymen. One finger placed into the rectum serves as guide for tenaculum and sound. It was already mentioned that the inspection of the cervix during menstruation gives sometimes information about the disproportion between cervical canal and its mucosa.

The therapeutic efforts so far as the mechanic conditions are concerned can easily be divided into two groups. One group try to cure dysmenorrhea by different methods of dilation or by incising the junction between cervix and body. The other group advocate plastic operations. All the interferences of the first category have one decided disadvantage. Their effect if any at all, is only a temporary one. The dilated cervix contracts again, an incision wound is filled out with cicatricial tissue which naturally shrinks and in the latter case the obstruction might be even worse than before. Apostoli's method in these cases has if at all also a temporary effect only. Outside of this the above mentioned dangers are to be taken into consideration. As plastic operations, I mention the method of Defontaine, Snegireff, and Alexandroff. All these methods intended to furnish permanent enlarging of the cervical canal. But the definitive results have not been very satisfactory.

Alexandroff, for instance, says in his article that in some only of eleven cases there was no relapse inside of a year.

The method which I use is in fact nothing

else than the application of the principles of Markwald's dissection, on the higher region of the cervix. I split open the cervix by two lateral incisions and excise on both sides out of the so produced flaps and out of the incision a wedge shaped piece of tissue, taking pains that the planum of the inner excisions runs close to the mucosa. The size of the wedge is tested as sufficiently large by introducing a 4 m.m. probe into the uterine cavity. Then the excision wounds are closed by sutures running in the frontal planum. The cervix now presents the aspect of a cervix with the usual characteristic bilateral tears after confinement. But in the course of a few weeks this deformity is reduced to insignificance. If somebody places value on the perfect reconstruction of the cervix he can continue the wedge shaped excision all around the circumference of the cervical canal through the anterior and posterior lip, and then apply the necessary sutures.

I used this modification in three cases of cicatricial obstruction of the cervix with perfect results. As to the statistics of the described method, I have at my command 47 cases collected in the last seven years, that is, 41 cases of my own and six cases out of Dr. Lobdell's practice. In 46 cases the definite results were perfectly satisfactory and in as much as 25 cases are of four and more years standing the probability is that the cure is a permanent one. One of the last mentioned six cases is a decided failure. Infection acquired during or immediately after the operation led to inflammatory changes which still keep up oedematous and inflammatory swelling of the concerned parts so that the menstruation is just as painful as before.

A very remarkable feature of this method is: More than 50 per cent of the cases show only a slight improvement at the first menstruation following the operation. It takes two menstrual periods for a definite cure to be established. Judging from the almost uniformly perfect and permanent results which are achieved by this operation I consider it justifiable to recommend it to the attention of the profession and this even more so, as in three of the cases after two, five and six years respectively, existing matrimonial sterility,

pregnancy and smooth confinement followed the operation.

I want distinctly to be understood that I do not recommend the indiscriminate use of this operation in dysmenorrhea, that only after all the other bloodless methods have failed and the diagnosis of mechanic obstruction is established we may resort to it. I consider it a particular duty of the gynecologists to make use of surgical methods of this kind in virginal individuals only, after the conditions have been fully explained to the patients and they have been given to understand the importance of such a step as destroying the hymen.

NOTES ON THE TREATMENT OF PUERPERAL INFECTIONS.*

BY THOMAS J. WATKINS, M. D., CHICAGO.

The treatment of cases of puerperal infection is the treatment of an infected wound. Infection of the puerperal uterus is, however, relatively more serious than most wound infections because the wound is comparatively inaccessible to treatment; the uterus contains numerous thrombosed vessels; absorption is rapid because of the large supply of lymphatics; and the organ, is poorly prepared to resist infection because it is in a process of atrophy or involution.

Bacteriological examinations have been of great value in the study of the disease but as yet have not been of much service in its treatment. It is of interest to know the kind of infection but it does not assist materially in the treatment.

Blood examinations are also of very little value in the treatment of these cases.

The author, however, believes that bacteriological and blood examinations should be persisted in as they are of interest, tend to cause more accurate study of the cases and they may lead to valuable discoveries.

INTERNAL MEDICATION.

The result of serum therapy in cases of streptococcus infection has been disappointing and one seldom obtains much benefit from its use. The chief difficulty is that there are numerous varieties of streptococci and only one variety of streptococcus serum.

After the use of the serum in numerous cases and from reports of cases the author believes the serum should be tried in all severe cases of streptococcus infection. The writer's experience has been that its use occasionally followed by improvement and in no case has it seemed to do any injury. If its use is not followed by a "reaction" it is not repeated and if reaction is obtained it is repeated in 12 hours for one or more times.

Ergot I believe to be of service in cases where the uterus does not remain well contracted as it tends to increase uterine drainage and by increasing the tonicity of the organ it tends to diminish the amount of absorption and to hasten involution.

In the large majority of cases of puerperal infection alcohol does much more harm than good, as it often interferes with the administration of food, causes the tongue to become dry, diminishes the secretion of urine, tends to prevent sleep and often excites delirium.

The use of nucleins seems at times to be beneficial. The most important internal remedy in the treatment of puerperal infection consists in the free administration of large amounts of nutritious food preferably—milk, beef juice, eggs, etc., and in the copious use of liquids to keep the toxins diluted and to force the excretions. This is often best done by the use of normal saline solution in the rectum or under the skin.

EXPLORATION OF THE UTERINE CAVITY.

In every case of puerperal infection the uterine cavity should be thoroughly explored for remnants of the products of conception.

This can always be done with the finger, when the cervix is sufficiently dilated, and it is the only way one can accurately determine the condition of the uterine cavity.

CURETTAGE.

If the uterine cavity is empty there is no need of curettage. If it contains placental or decidual debris it should be curetted preferably with the finger. In cases of abortion when the cervix is not sufficiently dilated to permit use of the finger, I believe the placenta forceps much preferable to the curette for this purpose as it is more certain in action, less dangerous and causes less abrasions. When the uterine cavity is empty the use of the curette is not only of no use but it is

*Read at 53d Annual Meeting, Chicago, May 30, 1903

harmful as it tends to break down the leucocytic wall which is nature's fortification against the invasion of bacteria and it produces abrasions which increases the absorptive power of the uterus.

It is only necessary to mention repeated curettage of the uterus, which is frequently practiced, in order to condemn it as an aimless, useless and dangerous procedure.

INTRA UTERINE IRRIGATION.

Intra uterine douches do as a rule much more harm than good in the treatment of puerperal infection. When debris is removed from the uterine cavity a single intra uterine douche is permissible to flush out loose particles of necrotic tissue, but after the uterine cavity is empty and when it drains itself there can be no apology for the use of an intra uterine douche. Numerous cases of puerperal infection are successfully treated by discontinuing douches especially intra uterine ones. The common method employed in giving intra uterine douches is almost certain to carry infection into the uterus.

Vaginal douches may be given under low pressure if the lochia tends to accumulate in the vagina and especially if it is offensive. Even under these conditions it is questionable if it is not better to occasionally change the position of the patient than to assume the dangers coincident to the use of vaginal douches, especially in the absence of a well trained nurse. The occurrence of a chill which frequently follows the use of douches, and which is probably often due to dislodgement of thrombi in the uterine sinuses emphasizes their danger.

DRAINAGE.

The use of gauze in the uterus or vagina is probably as apt to obstruct drainage as it is to promote it. The presence of the gauze increases the decomposition as is frequently proven by leaving sterile gauze in the vagina for 24 or 48 hours when it is always found to become offensive. The vaginal secretions in the same cases in the same length of time do not become offensive in the absence of sterile gauze. It seems to me that too much is usually expected from the use of drainage. One cannot expect that the infective bacteria will travel out along the gauze drain. The only function that the gauze can perform is to

prevent the accumulation of serum sanguineous or purulent in the wound. Such accumulated serum forms an excellent culture medium for the infective organisms and increases the amount of the toxins which they produce.

MAJOR OPERATIONS.

Until more is known about the treatment of puerperal infection, no definite rules can be laid down as indications for major operations for all cases.

It can probably be said without danger of contradiction that major operations are not indicated in the absence of peritonitis and pelvic tenderness and when no swelling can be found in the pelvis. In the presence of these conditions major operations are not indicated if the general condition of the patient indicates improvement, and as long as the patient continues to get better. One should continually bear in mind that, in the large majority of cases, the infection becomes less and less virulent until it becomes a negative quantity; that large puerperal pelvic exudates frequently disappear by absorption, and that the facial expression is often the most important prognostic symptom.

VAGINAL SECTION.

This is at times an important procedure for the purpose of determining with accuracy the condition of the pelvic organs. It is also occasionally life saving for the purpose of draining cavities filled with infected serum or pus.

The incision should be made as a rule posterior to the cervix into the cul-de-sac of Douglas because this is the best location for drainage as it is the lowest point in the pelvic cavity and gives the most ready access to palpation of the pelvic organs. With this incision one should always be able to determine the condition of the pelvic peritoneum and the uterine appendages. When distinct abscesses are found this method of drainage will frequently result in a complete recovery without the sacrifice of organs and without resorting to a dangerous operation. One should continually bear in mind that pelvic puerperal exudates in the absence of pus tend to completely disappear by absorption. This statement will be verified by any one who has observed a large number of cases of puerperal

infection. As a general proposition it may be said that incision and drainage of pelvic exudates and suppuration has a much more extended field of usefulness than the more radical operation. The writer can see no indication or theoretical apology for vaginal section and drainage in the absence of pelvic exudates or suppuration which has been recommended.

Puerperal pelvic abscesses are occasionally in closer proximity to the abdominal than the vaginal wall and are then best treated by an abdominal incision usually above and not far from Poupart's ligament.

HYSTERECTOMY.

This subject was thoroughly discussed at the congress of Gynaecologists and Obstetricians at Rome in 1902 and the consensus of opinion was that it had a very limited scope of usefulness. Unless the operation is made soon after the infection occurs the mortality must be high and to do the operation at that time would mean the unnecessary removal of many organs. At the Congress mentioned Fehling reported 60 cases of hysterectomy with a mortality of over 50 per cent. It is possible that the mortality in these cases would have been lower without hysterectomy. The following case illustrates the limited field which hysterectomy has in the treatment of puerperal infection. The patient was admitted to my care at St. Luke's Hospital two weeks after labor at term. Her child had a gonorrheal ophthalmia. The patient had an acute gonorrheal urethritis and vaginitis and a purulent uterine discharge. The uterus was large and fixed in the pelvis. There was a well defined mass in the region of both uterine appendages. Temperature 102, pulse 120. Abdomen much distended and tympanic; tongue dry; frequent bowel movements; facial expression bad.

Vaginal hysterectomy revealed multiple abscesses in the uterus, Fallopian tubes and ovaries. The convalescence was stormy but recovery was complete. It seemed that recovery in this case without hysterectomy would have been an impossibility.

In another case the uterus had been perforated during a curettage and both uterine appendages were suppurative. Recovery followed hysterectomy and it is quite probable that recovery would have occurred by removal

of the appendages without the uterus. I have done two other hysterectomies for perforation of the puerperalinfected uterus during curettage when the operation failed to save life. In one of these patients a temporary improvement followed the operation, the wound healed but the patient finally died of the septicemia.

Hysterectomy probably has no place in the treatment of puerperal infection in the absence of masses of inflammatory exudate or suppuration in the pelvis.

In cases where the uterus has been perforated it would usually seem better to make a vaginal section and establish drainage than to do a hysterectomy.

Hysterectomy is a valuable operation in occasional cases of:

1. Puerperal infection in a fibro-myomatous uterus.
2. Much inflammatory exudate or suppuration in the uterine wall.
3. As a supplementary procedure to salpingo oophorectomy, where the broad ligaments contain abscesses, for the purpose of establishing free drainage per vaginam.

SALPINGECTOMY AND OOPHORECTOMY.

More conservatism should be practiced in the treatment of salpingitis and oophoritis in the puerperal than in the nonpuerperal cases on account of the increased tendency in the former, of the infection to lose its virulency and of the inflammatory exudate to entirely disappear by absorption. Some cases of suppurative salpingitis and ovaritis require excision of the affected organs, but seldom when the abscess is so located that it can be incised and drained. An exception may be made when multiple abscesses are present. The uterine appendages should not be excised even when suppuration seems to be present if the tendency of the patient is to improve and especially if the blood count shows a daily diminution in leucocytes. Excision of the uterine appendages is reserved for cases when a diagnosis of suppuration is made, where the abscesses are so located or so numerous that they cannot be readily incised and drained, and where the patient ceases to improve.

Discussion.

W. H. Maley, of Galesburg: Mr. President.—I was very much interested in the Doctor's

excellent paper. I certainly agree with him in his desire to be conservative, and to make all possible effort to save the uterus and its appendages. Dr. Polk, of New York, states emphatically, and does not hesitate to do so, how ashamed he is when he thinks of the hysterectomies he used to perform, some of them succeeding in saving the lives of the patients, many of them in which there were fatalities, and he now states and recommends positively that as soon as he recognizes a case of puerperal infection, if the physician will make a free incision in the posterior cul de sac of Douglas, almost invariably there will be recovery with scarcely any other treatment.

Charles E. Paddock, of Chicago: I think Dr. Watkins has covered the ground in a clear and concise manner, and I agree with him in everything he has said. It is a complete and excellent paper. Inasmuch as he has spoken of the treatment, it would seem to me, if we want to take the time, when the woman arrives at the point of infection, to prevent infection it is necessary to have a better understanding of the treatment of the case, and especially of the third stage of labor. It seems to me, that there is where a great mistake is made, and that a limited knowledge of the treatment of the third stage of labor is perhaps the cause of so many cases of puerperal infection.

Regarding curettement in these cases, we must agree with the essayist. A day or two ago a physician told me that he had curetted a case after delivery, so that on the second or third day the woman developed a high temperature and died.

With reference to the use of antistreptococcus serum in these cases, possibly it should be used only in cases where we have infection by the streptococcus. The ordinary physician in general practice cannot always determine whether he has a simple mixed infection or a streptococcus infection. I have used this serum in cases where I knew we had a mixed infection to deal with, and got results. I reported a case a few years ago where I believe I got good results. Even today, where we have a mixed infection, or a streptococcal infection, we do not know what the germ is that is doing the damage. It may be the streptococcus, or other infectious germs. If the infection is due to the streptococcus, benefit is derived from the use of the serum, and I believe it should be used in all these cases.

Daniel T. Nelson, of Chicago: I rise to thank Dr. Watkins for his most admirable paper, and I regret very much that it was put at the end of the program, so that so few have heard it. Early in the session there were papers read that ought to be severely criticized, and perhaps they were a little too severely criticized, but very little or no criticism can be made of this paper. Dr. Paddock, it seems to me, struck a note that is very important in the treatment of all of these cases, namely, that prevention is by far the best treatment, and in not a few cases one will find that the initial cause is to be found in a previous condition of the excretions of the alimentary canal, etc., and, not infrequently, what I have feared was to be

a serious case of puerperal infection has cleared away nicely and beautifully by simply administering salines or some other active cathartic, as calomel, etc.

We should not forget what he has said about ergot. I have been considered an old crank on ergot, and I am glad to say that some of the younger men believe there is some advantage in keeping the uterus contracted. If it is the first confinement, the woman will be able to do it herself. If it is not done by massage, do it by ergot. Do it, any way.

As to the removal of the placenta or whatever may be left behind, this should be done very carefully. One should be sure as to what should be removed, and what should not be. If you cannot remove it by the finger, if it is a tumor or mass of cicatricial tissue, with very old and firm adhesions of the placenta, the curette will be of advantage to you. If you are determined to remove it, and it ought to be removed, do not forget to introduce your finger first, and follow it along with the curette, so that it shall simply be an additional instrument.

As to the position of the patient, some of you perhaps will remember the extensive experience of Dr. Goodell in Preston Retreat some twenty or fifteen years ago. I believe Dr. Joseph Price was connected with this institution at one time. There they allowed the patients to get up to respond to the calls of nature, to pass urine and to move the bowel on the third day after they were confined, unless there was some special reason why they should not. What was the advantage? Drainage, and Dr. Watkins has touched on that. I simply want to emphasize the idea that if the clots happen to be infected, or any loose placental tissue within the amniotic membranes which may be there should become infected, as long as they are driven out by the position of the body, there is no further trouble, or very slight trouble. The physician will sleep well the next night.

Gustav Kolischer, of Chicago: I want to endorse most heartily the statement of Dr. Watkins that we should not curette these cases of puerperal infection. Furthermore, I do not see the need of curetting a puerperal uterus. Suppose there should be some of the membranes left, or a part of the placenta left, is it absolutely necessary to curette the uterus with the finger or finger-nail, as someone has suggested. If you pack such a uterus with iodoform gauze and remove it at the end of ten or twelve days, or say five days, it may not be expelled by the contractions of the uterus. Once in a while iodoform gauze so used may have an offensive odor the next day or after twenty-four hours, but this does not amount to much. If we have saprophytic bacteria to deal with, the patient is not harmed. If we use sterilized iodoform gauze for the iodoform, there is no danger of iodoform poisoning.

There is one point I would like to take exception to, and that is, he says we should explore with our finger the uterus in every case of puerperal infection. I do not think Dr. Watkins meant that. If there is a case of puer-

peral ulcer on the cervix or vagina, with parametritis, no one would think of examining the uterus with the finger, and in this way carry infection to it. There must be clear indications to examine the uterus. The finger should never enter a uterus which is contracted in a case of puerperal infection. It is very important in all cases of so-called puerperal fever to be rather strict in regard to the indications, and in making a distinction of the different infections and processes. Much confusion arises from the use of such terms as puerperal fever, puerperal infection, septicemia, and pyemia. They are all used interchangeably. We have to distinguish between infections which will lead to the formation of extraperitoneal exudates and parametritis, or an infection which leads to general sapremia or general peritonitis, or we have to be sure that we are not dealing with a case of gonorrheal infection or peritonitis. The case the doctor reported was undoubtedly one of gonorrheal peritonitis. The symptoms did not appear until the second day after confinement. It is not necessary to remove the uterus in cases of gonorrheal parametritis. I do not believe we should make incisions in these cases unless the indications call for them. I do not think we should make exploratory incisions. If I do not find a mass or tumor in the parametric tissue between the uterus and bladder, it is harmful to incise, as we are liable to carry infection into the peritoneal cavity. I do not think an exploratory incision is justifiable in these cases, and I agree with Dr. Watkins as to the position he takes against incision in every case of puerperal infection of the posterior vaginal wall, to open the peritoneum near Douglas' pouch. This procedure was recommended two years ago by Pryor, of New York, and calls for criticism. No one would think of incising Douglas' pouch, because he may find serum there.

The recommendation of the essayist to give ergot is a good one. A great many so-called puerperal infections are nothing but a slight decomposition of the lochia, because the uterus has not contracted. I wish to mention one point, which I regard of some importance, and that is, if we administer ergot, in late periods of the puerperium, it should be given per rectum, if not per os.

Charles S. Bacon, of Chicago: There are a great many cases of puerperal fever, meaning by fever a temperature above 100°, where there is some debris in the uterus. If one is called to a case that he has not attended himself, he does not know whether a certain amount of placental tissue has been left in the uterus or not, and placental tissue is of no particular consequence if the patient is not infected. If she is infected or contaminated, or if either infectious germs or saprophytic germs gain entrance to the uterus, the debris causes trouble, and we must get rid of it in some way or other. It can be removed by the natural process of drainage, if the cervix is open, or there is no obstruction to drainage from the uterus. If there is obstruction, drainage is the important thing, and here tissue drainage is necessary. That is the reason the curette and douching of the uterus

are coming to be so general, although good results follow curetting the uterus sometimes. We get almost an immediate fall in temperature, and improvement of symptoms, with probably a cure in a great number of cases. It is impossible to dispense with the cleaning out of the uterus in one way or another, but we should remember that drainage is the important thing. If there is free drainage, like in any other infected cavity, nature will take care of itself, but occasionally it is very important to clean out the uterus in one way or another. If we have reason to think the uterus is clean, from our own conduct of labor, or after we have once cleaned out the uterus, then the continuation of the curette or of manipulations of the uterus, in a case of general septicemia, is the greatest mistake. It weakens the patient; it does no good, but may do harm. It is a common practice with some practitioners to do two or three or possibly four curettements, because the first does not effect a cure. The danger of curettement in general septicemia should be emphasized. The distinction between a sapremia and a genuine infection is not so easily made. There is often a confusion of the terms sapremia and septicemia.

Removal of the uterus for puerperal infection should only be done in extremely rare cases. How are we to know that there is some infection that cannot be controlled and that cannot be remedied by the removal of the uterus? In general septicemia, the removal of the uterus does no good. If the infection has become a thrombo-phlebitis, extending beyond the vessels of the uterus, the removal of the organ does no good, and, it seems to me, the difficulties in diagnosis are so great that one is hardly justified in many instances in removing the uterus. In exceptional cases, the uterus may be removed.

Emil Ries, of Chicago: I want to mention a few points in connection with this subject which I do not think I have spoken of before a meeting of general practitioners. I will speak of one or two points which were not specially discussed by Dr. Watkins, but which constitute a part of the subject, and demand attention. I have had a good many talks with general practitioners in my post-graduate work regarding the treatment of puerperal infection, and every once in a while they tell me that they go into the uterus on the second, the fifth, or the eighth day after labor, when the woman has fever, introducing the finger or curette, finding rough masses on one or the other side of the uterus, which they think are remnants of placenta or decidua, and they remove them carefully. It is a mistake. It is a mistake that is made quite frequently. The place where the placenta is attached is smooth, but it is not smooth for a week or ten days after labor. The researches of Schroeder and myself, which were made on perfectly healthy women, and the series reaches now one hundred and fifty, show that the normal condition of the womb is rough and uneven at the place where the placenta was attached for a week or ten days, until the decidua has grown over

the placental site. It is, therefore, unnecessary, useless, harmful, to scrape away this normal tissue. This is what is done so frequently when he tells us that he has got a handful of hard clots and placental tissue, but he has not made careful microscopical examinations to see whether it is placental tissue or whether it is not. There is not one chorionic villus. That is the only point I wish to mention, because the idea still prevails among general practitioners that there is something pathological that has to be removed.

In the treatment of puerperal infection, I recognize only one indication for going into the uterus, and that is hemorrhage from the uterus. If a woman really bleeds I will go into the uterus. If she has infection and does not bleed, I would no more think of going into her uterus than of going into her belly before she has typhoid fever.

Charles E. Paddock, of Chicago: I know I am out of order, but, Mr. President, I heard Dr. Ries make the statement a year ago that he would never go into the uterus unless there was hemorrhage. I would like to ask him one question. We are all doing this kind of work. Sometimes we leave parts of the placenta or we get a placenta succenturiata. We have all done that, and days afterwards we have found a large secondary placenta in the uterus, the uterus not infected, and no hemorrhage in the case. If there is anything in the uterus, one is liable to get hemorrhage, according to Dr. Ries. I do not believe it. I have seen the contrary, and I wonder whether he stands by that statement now.

Emil Ries, of Chicago: We had a discussion in this city, before a meeting of the Tri-State Medical Society, and at that time I made the statement which has been attributed to me by Dr. Paddock. Of course, Dr. Paddock has never had a case of placenta succenturiata where he has taken care of it. If parts of the placenta are left behind, he would recognize it, and find the blood vessels going out into the membrane. There must be something in it, and one might say this can only happen in the practice of others. But such a thing has happened, and a piece of placenta has been left behind which was not bleeding. We have a number of experiments in favor of the inactivity on part of the uterus. You may clean out such a piece of placenta, but the infection may start from there. You may clean out the placenta, and the woman gets a chill after it. She may get chill after chill and die. In so doing we have done something that is entirely unnecessary.

Michel, of Munich, professor of gynecology and obstetrics, who has had an experience with probably fifty thousand confinements, never removes such pieces of placenta. Small particles from abortions are not removed. The women are delivered, and it is easier to leave these small particles behind than to run the risk of infection. I wish to take the same position that I took a year ago, namely, that I will not go into the uterus of an infected woman unless there is hemorrhage.

Daniel N. Eisendrath, of Chicago: There is one phase of the subject which Dr. Watkins has not called attention to, which follows in the wake of puerperal infection. It is of such great importance that I think it ought to be mentioned in the treatment of puerperal infection, and that is the frequent occurrence of infection of the kidneys during the puerperal state. We not infrequently find through careless catheterization of the puerperal patient that there has been a cystitis set up, which possibly may have been, in some cases, of gonorrheal origin. During the puerperium this infection is rekindled or lit up, and the patient has symptoms of cystitis. She may seem to be doing nicely, so far as the vagina and uterus are concerned. Suddenly, on the fifth or sixth day, or in the second, third, or fourth week, the patient has a chill, followed with high temperature, and all the symptoms of acute sepsis. We look in vain over the entire genital tract for a condition to account for the symptoms, but do not find it. In some of these cases there has been an ascending infection along the ureter from the bladder up into the kidneys, as in a case on which I operated not long ago, and found the kidney riddled with multiple abscesses, some thirty or forty in number. These abscesses were sufficient to cause the symptoms, and were ascribed to puerperal sepsis. Acute interstitial and parenchymatous pyelonephritis is being recognized more and more. Anyone who understands the pathology of puerperal fever will leave the interior of the uterus alone as much as possible. If the infection has gone beyond the entire walls of the uterus, very little we do in the interior of the uterus is of any avail. I want to fully endorse the position taken by Dr. Watkins in his paper.

J. J. Hale, of Anna: This paper has elicited a very free discussion, and I only wish to draw attention to one point. The essayist failed to emphasize with sufficient distinctness prophylactic means in securing rapid and complete involution of the uterus. This is a prophylactic measure against puerperal infection, by massage, by the administration of ergot, hydrastis, etc. This is an important factor in all obstetric cases, namely, that we should secure as quickly as possible complete involution of the uterus, which can be done in that way.

Dr. Watkins (closing the discussion): I wish to thank the gentlemen for their kind and thorough discussion. I agree with most of what has been said in the discussion.

As to determining whether there is placental tissue within the uterus or not, I contend it is absolutely impossible to tell by introducing the finger into the uterus. Occasionally one will find placental tissue in a uterus when he least expects it, when one sees a case in consultation, and all the puerperal cases I see are in consultation. I do not take anybody's word that the placenta has all been removed. As to removing the placental debris with the finger, or packing the uterus, allowing uterine contraction and the hemorrhage about the gauze to loosen up the placenta so as to come

away itself, I think it is rather immaterial. It might be a little different which method one pursued. However, I would not quarrel with Dr. Kolischer about the technique in that regard. Of course, one would not explore a uterus if the woman had puerperal fever, which indicated a suppurative process, an enlarged tender kidney, or pus in the urine.

It is extremely difficult to find out the kind of infection. Pathologists are not able to determine this with exactness, because frequently these infections are mixed. The vagina contains numerous varieties of bacteria, and to me it is not very important to know whether it is a streptococcus, a staphylococcus, a gonococcus, or a mixed infection, because a streptococcus infection may be very mild, or it may be extremely severe. This is true of all varieties of infection.

I am very glad Dr. Ries brought up the question of roughness at the site of the placenta. There is no doubt that some practitioners use a lot of force, time, and endanger the life of the patient in removing this roughness which is a physiological condition after the separation of the placenta. Men should find out what the normal feel of implantation of the placenta is.

I did not touch upon prophylaxis, which is the most important part of puerperal infection.

I disagree with Dr. Ries in one regard, and that is the treatment of cases where a portion of the placenta has not been removed. If you will allow me, I would like to report a case briefly, which I believe is an illustration of the great value of removing portions of the placenta. The patient was seen thirty-six hours after labor; the temperature began to rise twenty-four hours after labor; at the end of thirty-six hours the temperature was 102°. She had a slight chill within twenty-four hours. Exploration of the uterus showed a large amount of placental tissue, and amniotic membranes, probably enough to fill two hands. This was cleaned out by means of a finger. Gradually the temperature declined to normal, and the patient went on to an uninterrupted recovery. The physician who examined the patient thought the placenta came away completely. There was no hemorrhage. I would like to ask Dr. Ries how he would treat a case like that.

Dr. Ries: If there was no hemorrhage, I would not go into the uterus. (Laughter.)

BROMETONE.*

A New Sedative—For Cough, etc.

BY E. FLETCHER INGALS, M. D., CHICAGO

About the middle of December, 1902, I obtained two ounces of this new drug under the name of Xanthone, a name which was subsequently changed for Brometone. I was

assured that it was safe, although it had been tried only in the laboratory. From its analogy to chloretone, it was thought to be an efficient sedative and a good antiseptic. The dose had not been determined but it was supposed that from five to twenty grains might be given to an adult several times a day without bad effects. Brometone is produced by the action of caustic alkalies upon bromoform and acetone; it occurs in fine white prismatic crystals which possess a camphoraceous odor and taste. Its melting point is about 167° centigrade. It is soluble in most of the organic solvents, as alcohol, ether, benzine, etc., slightly soluble in cold and more soluble in hot water. Its chemical name is tri-bromtertiary-butyl-alcohol, its chemical composition being represented by CBr_3CH_3COH which is the same as that of chloretone except that the chlorine is replaced by bromine.

The demonstrated effect of chloretone rendered it probable that Brometone would prove a valuable sedative that would not check elimination or disturb digestion. With this in view, I began its use for excessive cough in pulmonary tuberculosis, and the irritative cough of laryngo-tracheitis and bronchitis, and also to relieve asthma. Incidentally, I have used it to relieve headache and to prevent gastric fermentation. I administered the remedy in capsules and at first gave from five to fifteen grains four times a day, but I soon learned that very few patients could take more than eight grains at a dose without being made dizzy. As a result of further observation, I subsequently gave it in only five grain doses to be repeated in from one to four hours as needed for relief of cough, and most of the patients who took it in this way would use only 2 or 3 doses in 24 hours. One patient only, complained of pain in the stomach a little while after taking the Brometone which appeared due to her having taken too little water with the medicine. I have used the remedy in 25 or 30 cases with no unpleasant effects excepting gastric pain in one and dizziness which occurred in several to whom I gave more than five grains at a dose. One patient took fifteen to twenty grains four times a day before he complained of this

* Read before the Illinois State Medical Society, Chicago, April, 29, 1903.

symptom. Several of the patients were suffering from pulmonary tuberculosis, all but two of these being in the early stage of the disease. Some of these were markedly relieved of painful cough by the remedy, but others experienced little if any benefit. One patient suffering an attack of spasmodic asthma was completely relieved by two doses of five grains each, taken half an hour apart, but subsequently the remedy did little if any good. One man suffering from chronic endocarditis and myocarditis with pulmonary oedema, engorgement of the liver and kidneys and general anasarca found it the best remedy he had ever used for the relief of his cough, which at times was exceedingly troublesome. He continued to use the remedy for several weeks with excellent effects. One patient with pulmonary tuberculosis had a persistent and very trying occipital headache for several days which was completely relieved after taking three or four doses of brometone; and in several other cases headache has soon yielded to its influence. These headaches appeared to me purely nervous. Three or four patients with severe paroxysmal cough due to acute inflammation of the upper air passages obtained very great benefit from this drug. I have obtained good results from this added to tonic and digestive agents for the purpose of preventing gastric fermentation and the collection of gas in the stomach. I have records of all the cases in which I have used this remedy but as they were not indexed with reference to this particular subject, I cannot find them all without an expenditure of too much time. I think it probable that I have included in this report most of the cases that were markedly affected by the drug, because they would naturally attract the attention of my assistants and myself and it is also probable that in most of the records that I have not found the results were nil. I am indebted to N. P. Colwell for tabulation of these cases and we give below all the records we can find, without any selection, so that the reader may form his own unbiased conclusions as to the value of the remedy.

Case I. Miss B. A. age 28. Pulmonary tuberculosis of 9 weeks duration involving right apex as low as second interspace.

Cough very troublesome frequently causing vomiting. Brometone given in 5 and 10 grain doses with no relief. It caused dizziness.

Case II. Mr. H. L. a broker, age 27. Pulmonary tuberculosis of 14 months duration involving right apex as low as second rib. Cough severe. Tubercle bacilli very numerous in sputum, Brometone given in 5 grain doses with much relief from cough.

Case III. Mrs. I. J. age 36, pulmonary tuberculosis of 8 months duration involving right apex to third rib, there being also slight dullness over left apex. Cough troublesome. Bacilli found in sputum. Rapid loss of weight. Pulse 120, temperature 99.2, Brometone in 5 grain doses helped cough a great deal.

Case IV. Mr. M. L. a bartender, age 26, pulmonary tuberculosis of 14 months duration, bacilli found in sputum, headache and cough severe. Brometone in 5 grain doses taken every 3 hours greatly relieved cough, but made him dizzy. Later it seemed to relieve headache but not the cough. Still later patient said the brometone did not help him.

Case V. Mr. E. M., a clerk, age 37, pulmonary tuberculosis of about 2 years duration, night sweats and severe cough, with slight hemorrhages. Brometone in 5 grain doses every 3 hours made him very dizzy and brought on a headache with only a slight effect on the cough.

Case VI. Mrs. S. W. age 34, pulmonary tuberculosis involving left apex to about the second rib. Pulse 120, had severe hemorrhage, temperature 99. Sharp pain at intervals in stomach and back with headache. Brometone 5 grain doses three times a day gave great relief from the pain.

Case VII. Mr. W. J. a clerk, age 22, pulmonary tuberculosis of about 7 months standing involving upper half of right lung with troublesome cough. Brometone in 5 grain doses only slightly relieved cough but caused no disagreeable symptoms.

Case VIII. Mrs. B. S. age 35, chronic laryngo-tracheitis. Severe headache was greatly relieved by 5 grain doses of Brometone three times a day. No unpleasant symptoms.

Case IX. Mrs. C. A. age 40, laryngo-tracheitis accompanied by severe cough. At first brometone seemed to relieve cough but a few weeks later was without effect. No unpleasant symptoms.

Case X. Mr. F. J. a liquor dealer, age 62, suffering from acute laryngo-tracheitis with severe cough. Brometone relieved cough very much.

Case XI. Mr. H. F. a student, 20 years of age, a case of hypertrophic rhinitis with a very disagreeable sense of pressure in the head which persisted in spite of 5 grain doses of Brometone taken 4 or 5 times a day.

Case XII. Mrs. H. age 31, abscess of Antrum of Highmore with continuous severe occipital headache. Brometone 5 grain doses 4 times a day only temporarily relieved the headache, but made her very sick.

Case XIII. Mr. G. J. a bookkeeper age 58, hypertrophy and dilatation of heart. Had an annoying cough which was greatly relieved by 5 grain doses of Brometone.

Case XIV. Mrs. D. S. age 26, chronic endocarditis with mitral stenosis plus hypertrophy and dilatation. Also tracheitis. Severe frontal headaches and hard paroxysmal cough. The cough was much relieved by the Brometone, but it made her very dizzy.

Case XV. Mr. R. M. age 48, laryngo-tracheitis with a painful, hoarse cough. Brometone caused some dizziness and did not help the cough.

Case XVI. Miss R. J. age 23, a case of mild laryngo-tracheitis, pharyngitis and rhinitis intumescens. Had constant pains in top of head. No results reported from the Brometone.

Case XVII. Mrs. S. W. age 43, a case of emphysema troubled with dizziness and cough. No results reported from the Brometone.

Case XVIII. Mrs. W. S. age 57, a case of chronic bronchitis of 9 weeks duration with severe cough and headache. Brometone in 5 grain doses greatly relieved the cough but caused dizziness.

Case XIX. Mr. S. H. an actor age 34, suffering from rhinitis and laryngitis accompanied by a severe cough. Cough was

much improved by the Brometone. No disagreeable effects.

Case XX. Mr. Z. M. a tailor, age 31, atrophic rhinitis and laryngo-tracheitis, accompanied by dry, hoarse cough. Cough only slightly if at all relieved by the Brometone.

Case XXI. Mrs. W. M. age 25, troubled with asthma and bronchitis. An asthmatic attack was quickly cut short by 10 grains of Brometone. Other attacks were, however, not so favorably affected.

Case XXII. Miss H. J. age 21, general malaise with occipital headaches. Brometone relieved the headaches promptly, and they did not return.

Case XXIII. Mrs. H. F. age 31, rhinitis and tracheo-bronchitis with severe cough. No report yet received as to the effects of Brometone.

Case XXIV. Mrs. M. C. age 31, a case of tonsilitis with much cough. Brometone seemed to give no relief.

The occupations were in all cases such as kept the patients much of the time indoors. Among these patients there were 7 cases of pulmonary tuberculosis, one of which was in the last stage and another well advanced, but 5 were in the early stages. Of these cases 4 including the two more advanced, obtained much relief from the severity of the cough by the use of the Brometone. The other 17 patients were cases of bronchitis, laryngitis, etc., including one asthma and one case of pulmonary emphysema, all of whom suffered from severe cough or headache. Eleven of these obtained relief, two did not and from four no word was received as to whether the medicine was helpful or not.

Two cases of early phthisis, one case of laryngo-tracheitis, and one case of tonsilitis said they obtained no relief whatever from the drug. Two of these stated that the medicine made them dizzy while the third spoke of "an astringent taste in the mouth." All of these very soon discontinued taking the medicine.

Four of those who were benefited by the drug spoke of dizziness. One of these patients took 5 grain capsules every three hours, the other three had been directed to repeat

the dose after from 2 to 5 hours. Two other patients obtained relief at times while at other times the medicine seemed to have no effect. The Brometone was usually given in 5 grain capsules to be taken as needed for cough or for headache, to be repeated in from 2 to 5 hours as needed. Of the 15 who were helped by the drug, in 9 the relief was from the cough, in 4 from headache; 1 had an asthmatic attack quickly checked and 1 obtained relief from severe pain in the back.

In conclusion I may state that Brometone in doses of 5 grains four or five times a day in adults, causes no unpleasant results excepting in rare instances, dizziness. It is an excellent sedative that excepting in very rare instances causes no disturbance of the digestive organs, and does not appreciably affect the secretions, therefore, when effective, it is much preferable to the older anodynes. Its action is prompt and its effect remains for several hours. I should expect good results from its administration in the prevention of gastric fermentation and in relieving painful digestive disorders.

CONSTITUTION.

ARTICLE I.—NAME.

The name and title of this organization shall be the Illinois State Medical Society.

ARTICLE II.—PURPOSES OF THE SOCIETY.

The purposes of this Society shall be to federate and bring into one compact organization the entire medical profession of the State of Illinois, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself and more

useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES.

Component Societies shall consist of those county medical societies which hold charters from this Society.

ARTICLE IV.—COMPOSITION OF THE SOCIETY.

SECTION 1. This Society shall consist of Members, Life Members, Honorary Members and Guests.

SEC. 2. MEMBERS. The Members of this Society shall be the members in good standing of the component societies.

SEC. 3. LIFE MEMBERS shall consist of those members who have already been elected life members by the Society.

SEC. 4. HONORARY MEMBERS shall consist of those physicians of other states, territories, island possessions or foreign countries who have risen to prominence in the profession of medicine who may be elected by a nine-tenths vote of the Members of the House of Delegates present at any annual meeting.

SEC. 5. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session on invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES.

The House of Delegates shall consist of (a) Delegates elected by the Component Societies; (b) the Councilors; and (c), *ex-officio*, the President and Secretary of this Society, and the Chairman of its Standing Committees. It shall be the legislative body of this Society, and shall conduct all business, except such as is otherwise provided for by the Constitution and By-Laws. All recommendations of the House of Delegates dealing with the acquisition or disposal of property of any kind, or with the appropriation or expenditure of funds in any way must be approved by the Council before the same shall become effective. Twenty Delegates shall constitute a quorum for the transaction of business.

ARTICLE VI.—COUNCIL.

SECTION 1. The Board of Trustees, or, as in this Constitution and By-Laws designated, the Council, shall consist of nine Councilors elected by the House of Delegates and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall have charge of and control all the property of this Society of whatsoever nature and of all funds from whatsoever source.

SEC. 2. No person shall expend, or use for any purpose, money belonging to the Society without the approval of the Council.

SEC. 3. All acts of the House of Delegates involving the expenditure, appropriation or use in any manner, of money, or the acquisition or disposal in any manner of property of any kind belonging to the Society, must be approved by the Council.

SEC. 4. The Council shall formulate rules governing the expenditure of money to meet the necessary running expenses and fixed charges of the Society, as well as such other rules governing its actions, as it may deem necessary or desirable. Six members of the Board shall constitute a quorum for the transaction of business.

ARTICLE VII.—SECTIONS AND DISTRICT SOCIETIES.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VIII.—SESSIONS AND MEETINGS.

The Society shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members.

ARTICLE IX.—OFFICERS.

SECTION 1. The officers of this Society shall be a President, Vice-Presidents, as hereinafter provided for, a Secretary, a Treasurer and nine Councilors.

SEC. 2. The President, Secretary and Treasurer shall be elected annually by the House of Delegates, to serve for a term of one year. The Presidents of the Councilor District Societies shall be the Vice-Presi-

dents. The Councilors shall be elected by the House of Delegates. Three of them shall be elected at first to serve for one year, three to serve for two years, and three to serve for three years. Thereafter three shall be elected annually to serve for three years. All officers shall serve until their successors are elected and installed.

ARTICLE X.—FUNDS AND EXPENSES.

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$2.00 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the Society's publications, and in any other manner approved by the House of Delegates.

ARTICLE XI.—REFERENDUM.

SECTION 1. A General Meeting of the Society may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Society, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE XII.—THE SEAL.

The Society shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS.

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any Annual Session, provided that such amendment shall not be acted on until the day following that on which it was introduced.

B Y - L A W S .

CHAPTER I.—MEMBERSHIP.

SECTION 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Society and all the rights and privileges pertaining thereto.

SEC. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SEC. 3. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that Session. No member shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE SOCIETY.

SECTION 1. The Annual Session shall convene on the third Tuesday of May, but the President, the Council concurring, may change this time in order that the Society may convene before the date set for the meeting of the American Medical Association, or for any other good and sufficient reason. The place of holding the Annual Session shall be determined by the House of Delegates.

SEC. 2. Special meetings of either the Society or the House of Delegates shall be called by the President on petition of twenty Delegates or fifty members.

CHAPTER III.—GENERAL MEETINGS.

SECTION 1. All registered members may attend and participate in the proceedings and discussions of the General Meetings and of the Sections. The General Meetings shall be presided over by the President or by one of the Vice-Presidents, and before them shall

be delivered the address of the President and the orations.

SEC. 2. The General Meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public.

CHAPTER IV.—SECTIONS.

For the transaction of scientific business there shall be, at present, Two Sections, viz.:

SECTION 1. Including the practice of Medicine, Medical Specialties, Materia Medica and Therapeutics, Etiology, Pathology, Hygiene, State Medicine, and Medical Jurisprudence.

SEC. 2. Surgery, Surgical Specialties and Obstetrics.

Each Section shall elect its own Chairman and Secretary.

CHAPTER V.—HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Society, and shall fix its hours of meeting so that they shall not conflict with the General Meetings of the Society. But if the interests of the Society and profession require, the House of Delegates may meet in advance of the General Meeting.

SEC. 2. Each component society shall be entitled to send to the House of Delegates each year one delegate for each 75 members, and one for each major fraction thereof; but each component society which has made its annual report and paid its assessment as provided for in this Constitution and By-Laws shall be entitled to one delegate.

SEC. 3. Twenty delegates shall constitute a quorum.

SEC. 4. It shall, through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Society, and shall constantly study and strive to make each Annual Session a stepping stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and en-

force all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who is or can be made reputable has been brought under medical society influence.

SEC. 7. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

SEC. 8. It shall divide the State into councilor districts, specifying what counties each district shall include, and, when the best interest of the Society and profession may be promoted thereby, shall organize in each a district medical society, and all members of the component county societies of that district shall be members of such district society. The presidents of such district societies shall be the Vice-Presidents of this Society.

SEC. 9. It shall have authority to appoint committees for special purposes from among members of the Society who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

SEC. 10. It shall approve all memorials and resolutions issued in the name of the Society before they shall become effective.

CHAPTER VI.—ELECTION OF OFFICERS.

SECTION 1. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes, at the first session of the third day of the General Session.

CHAPTER VII.—DUTIES OF OFFICERS.

SECTION 1. The President shall preside at the General Meetings of the Society and at the Meetings of the House of Delegates. He shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State, and assist the Councilors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties; preside in his absence or when called on to do so. In the event of the President's death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond at the discretion of the Council. He shall demand and receive all funds due the Society, together with the bequests and donations. He shall pay money out of the treasury only on approval of the Council. He shall subject his accounts to such examination as the Council may order. He shall annually render to it an account of his doings and of the state of the funds in his hands, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary shall attend the General Meetings of the Society and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be *ex-officio* Secretary of the Council. He shall be custodian of all record books and papers belonging to the Society, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall, with the co-operation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by

counties, noting on each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the Treasurer. Acting with the committee on scientific work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Council.

CHAPTER VIII.—COUNCIL.

SECTION 1. The Council shall meet daily during the Annual Session of the Society and at such other times as necessity may require, subject to the call of the chairman or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Society to outline work for the ensuing year. It shall elect a chairman and a clerk, who, in the absence of the Secretary of the Society, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates.

SEC. 2. Each Councilor shall be organizer, peacemaker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exists; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties

herein imposed may be allowed by the House of Delegates on a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Society.

SEC. 3. The Council shall be the board of censors of the Society. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Society. All questions of an ethical nature before the House of Delegates or the General Meeting may be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or component societies on which an appeal is taken from the decision of an individual Councilor. An appeal from the decision of the Council may be taken to the House of Delegates.

SEC. 4. In sparsely settled sections or for other sufficient reasons, it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated, so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Society, and all orders on the Treasurer for disbursements of money must be approved by the Council. It shall annually audit the accounts of the Treasurer and Secretary and other agents of this Society and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Society under its control, with such suggestions as it may deem necessary. In the

event of a vacancy in the office of the Secretary, or the Treasurer, the Council shall fill the vacancy until the next annual election.

CHAPTER IX.—COMMITTEES.

SECTION 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Medical Registration.

A Committee on Medical Legislation.

A Committee on Public Policy.

A Committee on Arrangements, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided for.

SEC. 2. The Committee on Scientific Work shall consist of the chairman and secretary of the respective Sections and the President and the Secretary of this Society. It shall arrange the scientific program for each session, subject to instructions by the House of Delegates.

SEC. 3. The Committee on Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates, it shall represent the Society in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion; shall endeavor to establish legislation, so as to secure the best results for the whole people.

SEC. 4. The Committee on Public Policy shall consist of three members and the President and Secretary, and shall have charge of all matters of public policy of interest to the Society, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections, and shall call a preliminary meeting of the members of the Society for the discussion of any such subjects which may be presented, and shall report the recommendations of such meetings to the House of Delegates at its first meeting.

SEC. 5. The Committee of Arrangements shall be appointed by the component society of the county in which the Annual Session is to be held. It shall provide suitable accommodations for the meeting places of the So-

ciety, the Sections and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session, as occasion may require.

CHAPTER X.—COUNTY SOCIETIES.

SECTION 1. All county societies now in affiliation with this Society, or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application to and approval of the Council, receive a charter from and become a component part of this Society.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Society.

The House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the district, if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally registered physician who does not claim to practice nor lend his support to any exclusive system of medicine shall be entitled to membership.

Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the Society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council and finally to the House of Delegates.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its own judgment will best and most fairly present the facts, but in every case of appeal efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society changes his residence to another county in this State, his name shall be transferred, without cost, to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each county society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county, and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. The secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college, and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making this annual report he shall account for every physician who has lived in the county during the year. When requested, he shall furnish,

on blanks supplied to him for the purpose, an official report containing such information to the Secretary of this Society.

SEC. 12. The secretary of each county society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Society between the first and tenth of April of each year.

SEC. 13. Any county society which fails to pay its assessment, or make the report required, on or before April 15 shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met.

CHAPTER XI.—MISCELLANEOUS.

SECTION 1. No address or paper before the Society, except those of the President and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

It shall be the policy of this Society for the Chairmen of Sections to give preference to those papers that have been previously read before a component society.

SEC. 2. All papers read before the Society or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

SEC. 3. The deliberations of this Society shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

CHAPTER XII.—AMENDMENTS.

These By-Laws may be amended or suspended by the House of Delegates at any Annual Session by a two-thirds vote of all the delegates present.

MINUTES OF THE ANNUAL MEETING.

The minutes of the annual meeting will be printed in the July issue of the Journal and all the minutes of the meeting will appear in that issue.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Calhoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—A. S. Wall, M. D., Champaign.
Christian County—W. T. Bridges, M. D., Stonington.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
DeWitt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—Geo. P. Cassidy, M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. N. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. G. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—R. E. Lewis, M. D., Macomb.
McLean County—E. S. Reedy, M. D., Bloomington.
Macoupin County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackey, M. D., Aledo.
Montgomery County—G. A. Clotfelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.
Pope County—W. S. Dixon, M. D., Rosebud.

Pulaski County—A. W. Farr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. R. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—A. W. Ball, M. D., Rushville.
Scott County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermilion County—E. E. Clark, M. D., Danville.
Wabash County—G. C. Kingsbury, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marlon.
Winnebago County—S. R. Catlin, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyler, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopeston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
Aurora Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynaecological—R. W. Holmes, M. D.,
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Lodor, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side—Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—L. H. Mettler, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tivnen, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.

The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

JUNE, 1903.

GOVERNOR YATES AND THE SOCIETY BOGY.

The large and better part of the medical profession of Illinois were much gratified last January when Governor Yates in his message to the Legislature recommended in strong language the creation of a Board of Medical Examiners. The Governor seemed to realize the fact, which had been apparent

to the profession for many years, that the Board of Health should be relieved of the great burden of examining, licensing and regulating the large body of citizens engaged in the all important work of the practice of medicine and be permitted to devote its entire time to the vast problems of sanitation and hygiene which constantly appear in the government of five millions of people. He

seemed to realize that the Board for the past seven years has been so overburdened with work that, according to its own statement, it has been unable to issue a single annual report such as had been issued during the previous twenty years of its existence. He seemed to realize that nine tenths of the work of six members of the Board of Health was connected with the law which requires them to act as medical examiners and that ninety-nine one hundredths of the work of the Board as a Health Board can be and is transacted by one man, the Secretary. He seemed to realize that the Board had not, and, under the circumstances, could not take hold of the many opportunities for benefiting the people and the legitimate practitioners of medicine which would make it the most popular branch of the State government instead of being as it is said to be the most unpopular. All these things we say the Governor seemed to realize.

* * * * *

But somewhere and somehow it seems the executive experienced a change of heart in reference to this question. What brought this about? Was the influence of the Secretary of the State Board of Health potent in causing this change? Was the Secretary of that Board ever really in favor of the bill? Was his resignation from the Legislative Committee of the State Society just at a critical time in the work of that committee significant? Was the new set of minimum requirements for the graduation of students adopted last July an attempt to forestall the necessity for a separate Board? Were the officers of the State Board acting for themselves when they appeared as the leaders in opposing the passage of the law? However this may be all these things led directly to the inference that the Governor himself did not desire to have it passed. This was the last straw needed to defeat the bill and it died in that committee

to which it appears now with good reason the Secretary of the State Board of Health had urged that it be sent. And this again notwithstanding the fact that the Governor had personally stated to Chairman Black that the bill in its final form was perfectly satisfactory to him, and notwithstanding the fact that the President and Secretary of the Board of Health had repeatedly stated that the bill as amended was satisfactory to them and would have their hearty support.

* * * * *

The bill died and of course never came before the executive for consideration. In view of his several statements to the committee we had every reason to believe that the Governor was favorable to our bill and would have signed it had it been placed before him. Here we come across another remarkable paradox for Governor Yates in vetoing other bills of a somewhat similar nature which did reach his office went out of his way to attack our bill and our Society. We feel it incumbent on us therefore in defense of the Society to take up this question seriously and at length.

In vetoing the bill requiring the licensing of trained nurses, he said:

"It is not consistent with the general policy of the constitution."

The bill provides for examination, registration and licensing of nurses and the regulation of institutions which graduate or confer degrees or diplomas on nurses by the State Board of Health. Section 12, inserted by the State Board of Health, the executive says, "is so unwholesome that its necessity as an exemption is apparent to all."

Referring to the examination provided by the measure, Governor Yates says:

"It has been proposed that a state board of medical examiners be appointed by the governor from a list of nominations submitted by the State Medical Society. If the tendency is not checked, it soon will be proposed that the attorney general be required to appoint the assistant attorney general from a list of nominations presented by the state bar association. In other words, there seems to be a

decided tendency towards 'government by society,' which is objectionable as any other kind of government not recognized by the constitution."

Again in vetoing the dental bill he appeals to the galleries in the following language:

When a committee of dentists called upon Gov. Yates to urge him to sign the dental bill he stated emphatically that he would veto the measure. The dental bill was objectionable to **dental students**, and since its passage by the house and senate the governor received many personal requests to have it vetoed. In vetoing the bill Gov. Yates says:

Gives Societies Too Much Power.

"Experience has shown that a board composed of persons selected by a society, and whose appointment is merely ratified by the governor, have not that due sense of obligation and responsibility to the state which, in my opinion, is essential to the due performance of the duties of their offices. Furthermore, the tendency to permit societies to name boards of state officers is, in my opinion, leading and ending to an actual abuse. Governing by society is as objectionable as any other form of government not recognized by the state constitution. If the general assembly, in their wisdom, believe that a board should not be nominated and appointed by and with the advice and consent of the senate, then they have it in their power to provide that they should be elected by the people. Furthermore, the constitution expressly states that the general assembly shall not make any appointment to any office whatever. It is, in a certain sense, an indirect way of appointing officers by the general assembly when the general assembly prescribes exactly whom the governor shall appoint. In my opinion, the constitutional provision which says that the governor shall nominate and appoint, cannot be restricted in any way, except where officers are required to be elected.

Is Dictation to Governor.

"But the principle of allowing societies to do that which even the general assembly is absolutely prohibited by the constitution from doing, namely, to dictate to the governor who shall be appointed, is wrong and bad in every sense. The right to say that the governor of the state shall be restricted in his selection to any party or parties, person or persons, association or associations implies the right to impose restriction upon him which would

practically destroy his independence and leave him no real power whatever. The right to make one restriction implies the right to make a thousand. The right to restrict him as to one board, implies the right to restrict him as to all boards. Hostility on the part of a general assembly, growing out of any kind of a disagreement, might result in the amendment of every law in the state, so that every state board would have to be so selected that not a single trustee or commissioner could really be appointed by the governor. This, of course, would be a very extreme case, and it is a highly improbable proceeding, but it is an entirely possible proceeding."

The most important statement the Governor makes concerning our bill is that it would be unconstitutional. Notwithstanding the great legal learning of the Governor we have the right to say that other gentlemen of the highest legal position drew up the bill and declared that neither the letter nor the spirit of the Constitution of Illinois was trampled on by the provisions of the proposed law.

* * * * *

In proof of this we will cite the fact that a similar law is on the Statute Books of Illinois regulating the practice of pharmacy. The provisions of this law for the appointment of members of the Board of Pharmacy are very similar to the provisions of our proposed law on the same subject except that it is even more radical than ours. Again the State Board of Agriculture which disburses ten dollars where a Board of Medical Examiners would disburse one is appointed by county agricultural societies, organizations over which the Governor is supposed to have no control. Again the Justices of the Peace of Cook County are appointed by the Governor on the recommendation of certain judges of that county. Again the Supreme Court of Illinois appoints Boards to examine students of the law for admittance to practice without the advice and consent of the Governor or any one else. Still farther

we believe the Bar Association of Chicago has actually placed the duty of naming the candidates for judges of the courts for both parties absolutely in the hands of that organization. Moreover the Governor well knew that every reasonable objection raised along these lines of restriction of the executive in naming the board had been met in the language of our proposed bill. The language on this point was "The Governor may in his discretion appoint," etc.

* * * * *

But let us go still farther and ascertain what laws other states have enacted covering this matter of appointment. It is not to be supposed that the people of these states are any less enlightened than our people nor have their executives been any less intelligent or jealous of their prerogatives than Governor Yates. Here are a few of the facts. In the states of Wisconsin, New York, Virginia, Vermont, Arizona and Delaware the State Societies absolutely control the nominations for their respective Boards. The Governor, as we understand it, has absolutely no voice in the matter and yet the actions of these Boards are legal and apparently no rights of the executive or people are lost.

In the District of Columbia and the States of Indiana, Ohio and Pennsylvania and other states each school of medicine is recognized as being entitled to a given number of members of the Board. In Texas the law of 1879 says the district judges shall appoint in each judicial district three practitioners of known ability and who are graduates of medical colleges recognized by the A. M. A. In Alabama the law is altogether in the hands of the regular profession.

Thus we see that in nearly every state of the Union, Illinois excepted, the right of the legally constituted medical societies to have more or less of a voice in the enforcement of laws regulating the practice of medicine

seems to be well established. When this is known to our readers and the public we believe that the boggy of the unconstitutionality of so called "government by society" will disappear into thin air.

* * * * *

Governor Yates in vetoing the dental bill seemed to lay special emphasis on the objections which had been urged by dental students thus giving more attention to the callow youths on the benches than to the learned and honorable men who were endeavoring to preserve the good name of the State which has been sadly maligned by the low standards which have prevailed in the past.

* * * * *

So too in seeking to subvert the efforts of the Illinois State Medical Society in its endeavor to place Illinois on the same level with New York, Michigan, Indiana and Wisconsin Gov. Yates seems to ally himself with the worst elements of the profession. It is this element which is fostering diploma mills and fake hospitals. It is this element which recruits the traveling "specialists" and allies itself with "boy wonders" to rob the people. It is this element which magnifies the lapses of the honorable practitioner who is trying to do right and is blind to the depredations of charlatans and professional pirates. If the executive and the Board of Health ally themselves with this class the State Society can only deplore their mistake. It will know how to act in the future.

THE CHICAGO MEETING.

The 53d annual meeting of the State Society was as usual an interesting one. The attendance was fairly large although the number registered was much less than we had hoped for and had reason to expect. No doubt the unseasonable weather and consequent amount of sickness in the city and throughout the State prevented many from attending.

For the first time a House of Delegates transacted the business of the Society. Its first herculean labor was the bundling of our one year old constitution out of the back door and the adoption of a new document. It remains to be seen how the new one will serve its purpose. At this writing it appears to be an excellent document as amended by the House.

* * * * *

The election of officers was accomplished more speedily and happily than at any other meeting of the State Society we have ever attended. Probably the choice of the members was so unanimously apparent for the Presidency and the other officers that there was little difficulty in selecting them.

* * * * *

The election of the President was an inspiring event and a great compliment to the chairman of the Legislative Committee. The Society thereby set the seal of its approval on the tremendous and unselfish efforts of that committee to secure a new law regulating the practice and by this same token showed its disapproval of the men who were lukewarm in its support or absolutely opposed it.

* * * * *

One of the unfortunate actions of the house was the abolition of the third section. The readers of the address and papers prepared for this section will agree with us in saying that it should not be abolished. The mistake—honestly made—of putting this section off to itself was the cause of the trouble. Let us have this section restored at our next meeting and then arrange the meetings so that every member in attendance can hear and discuss these important topics.

* * * * *

Notwithstanding the warnings given we have an impression that none of the section meetings were attended as they should have been. The attractions of a great city are too

great and the temptation to do a little shopping too urgent to permit the members engaging in the scientific work for which they left their homes. Of course Chicago members had their home professional duties to perform and the entertainments of the visitors to look after so that they did not have a great deal of time for anything else. All of this goes to prove the paradoxical statement that Chicago is the best and worst place to hold the meetings of the Society.

* * * * *

The smoker at the Sherman House, the dinner to Prof. Mickulicz at the Athletic Club, the banquet of the Western Alumni of Bellevue and University Colleges of New York, and numerous smaller affairs were delightful occasions which will never be forgotten.

* * * * *

All in all the Chicago meeting must be voted a grand success.

THE PROPOSED LAW DEFEATED.

The law upon the preparation of which the Legislative Committee spent so much effort and time went down to ignominious defeat in the Committee on Judiciary of the House of which Mr. Shurtleff was chairman. We announce this fact with great regret because we personally know of the faithful effort which was made by a large number of members of the profession to bring about an improvement of the conditions existing in Illinois at this time.

* * * * *

It would not be difficult to lay the responsibility for this defeat at the proper door or rather doors, but as the members apparently are already aware of the "four flushing" methods adopted to accomplish the assassination we refrain from further discussion of this phase of the matter.

The Illinois State Medical Society and the enlightened public it represents can afford to wait a few months for a better law. The state officials who have prostrated themselves before the car of progress and temporarily obstructed it, will have occasion to regret their mistaken attitude in the no distant future.

MORTALITY STATISTICS OF ILLINOIS CITIES FOR APRIL, 1903.

	Popu- lation.	Death Rate.	Diph- theria.	Scarlet Fever.	Measles.	Small- pox.	Typhoid Fever.
Chicago	1,885,000	16.96	47	32	70	9	33
Springfield..	40,000	14.12	0	1	70	2	0
Jacksonville.	16,000	19.50	0	0	12	0	0
Pontiac	4,266	5.62	0	0	0	0	0

The high mortality rate of Jacksonville we are assured is explained by the fact that deaths occurring in the Central Hospital for the Insane are counted as belonging to that city. Excluding these the mortality of the city will be found low.

In Chicago an investigation by the health department of twenty deaths of diphtheria has shown that they were either due to mistaken diagnoses or to delayed or improper administration of antitoxin. One physician attempted to administer the serum with a hypodermic syringe, and of course it was uncertain how much the patient received. The records of the department conclusively prove that antitoxin administered the first or even second days of diphtheria prevents death. It is also positively proven that an early diagnosis cannot be made without the aid of the microscope.

There are numerous physicians who treat yearly a large number of diphtheria cases who have not lost a patient from this disease for years. Their inflexible rule is to take a culture at the first visit and to administer antitoxin at once when the diphtheria bacilli are found.

For a physician to treat a patient with an acute inflammation of the throat for days without a microscopic examination is little short of criminal neglect. The essentials in the treatment of diphtheria are an early diagnosis and the prompt administration of antitoxin. Physicians who are prepared in these essentials are seldom called upon to give a death certificate.

During the past year the department has used the ordinary antitoxin instead of the "special concentrated." The antitoxin administrators report no marked difference in results. The cost of the concentrated serum is almost double, while the curative value per unit is the same.

OBITUARY.

George P. Cassidy, M. D., a prominent physician of Shawneetown, Ill., died at his home, May 15th from pneumonia, aged 43 years. He was born in Gallatin County, Ill., June 6, 1860, was graduated from Miami Medical College, Cincinnati, in 1885, and was offered the position as physician to the University of Notre Dame, Ind., (from which institution he had previously graduated), but he declined that position and has since been the leading physician of Shawneetown and Gallatin County.

He founded the Gallatin County Medical Society and also was a member of Illinois State Medical Society and American Medical Ass'n. He was a delegate to the State Medical Society and had just returned from Chicago, when he had a chill and developed pneumonia. The disease was severe from the start and despite the closest and kindest care he died nine days later. So highly was he appreciated for his professional ability, and respected as a noble citizen, that strong men wept alike with women and children. He was buried May 17th and his was the largest funeral in the history of Shawneetown.

Local Societies.

The Vermilion County Medical Society met May 11th. The paper of the evening was on the **Medical Treatment of Senile Enlargement of the Prostate with accompanying Cystitis**, by Geo. L. Prentice. The discussion was opened by T. E. Walton and closed by the essayist.

E. A. Johnston gave a report of the recent meeting of the State Society.

E. E. Clark, Official Reporter.

The Hamilton County Medical Society was organized at McLeansboro, April 15, with a membership of fifteen. Henry E. Hale of Belle City was elected president; W. F. Hall, of McLeansboro, first vice-president; M. C. Dale, of McLeansboro, second vice-president; C. M. Lyon, of McLeansboro secretary, and D. F. Whited, of Dahlgren, treasurer. The president appointed Harry Dale and W. W. Hall, of McLeansboro and L. C. Morgan of Dahlgren, censors. W. F. Hall, E. A. Hogan and C. H. Anderson, were appointed to revise the constitution and by-laws. The Society voted to meet on the first Wednesday in July, October, January and April.

C. M. Lyon, Official Reporter.

The Fulton County Medical Society met in regular session in Esq. Moran's office in Canton, May 5, 1903.

1:30 P. M. called to order by president.

Paper by Dr. Oren, **Pathological condition of the Nasal Passages** and effects of same with reports of a few cases.

Discussion by Drs. Rogers, Heise, Robb and Coleman. Closed by Oren.

Paper by Dr. Robb, **Some cases of Medico Surgical** interest demanding an early diagnosis and prompt radical measures.

Discussion by Drs. Coleman, Chapin, Sutton, Oren and paper closed by Dr. Robb.

Paper by Dr. Chapin, **Obstetric Technic.**

Motion by Dr. Heise to postpone action on affiliating with the State Society until next annual meeting. Carried.

President appointed Regan, Chapin and Zeigler as committee on arrangement for next meeting.

Lewistown was selected as the place for the next meeting on July 7th at 11 A. M.

D. S. Ray, Official Reporter.

The Brainard District Medical Society held a very interesting meeting in the city council chamber of Lincoln, April 23, 1903. The following officers were elected and committees appointed: President, A. M. Sargent, Lincoln; Vice-President, Irving Newcomer, Petersburg; Secretary, H. S. Oyler, Lincoln; Treasurer, C. C. Reed, Lincoln; Delegate to the State Society, J. L. Lowrie, Lincoln.

Legislative Committee, J. L. Lowrie, Lincoln; S. T. Hurst, Greenview; J. W. Newcomer, Petersburg. Committee on Program, J. R. Barnett, Lincoln; J. W. Bozarth, Mt. Pulaski; A. G. Servoss, Havana. Committee on Microscopy, J. D. Whitley, Petersburg; H. S. Oyler, Lincoln; C. C. Montgomery, Lincoln.

A very interesting paper on **Pulmonary Tuberculosis** was read by C. C. Montgomery of Lincoln.

A paper on **Albumin in the Urine**, its significance and determination, was presented by H. S. Oyler of Lincoln.

On report of cases H. B. Brown of Lincoln, exhibited an interesting specimen from a case of **Gangrenous Appendicitis**.

Society then adjourned to meet at Springfield, Thursday, July 23, 1903.

H. S. Oyler, Official Reporter.

The Western Illinois District Medical Society met in city council room at Carrollton, Friday, May 8, 1903. Called to order by President Chapman. Present: F. P. Norbury, F. A. Clement, H. W. Smith, J. W. Adams, H. W. Chapman, J. W. Redwine, G. W. Ross, E. S. Gooch, T. H. Hall, F. H. Russell and H. A. Chapin. Visitors: J. B. Hayes and Howard Burns. Minutes of previous meeting were read and approved.

The president appointed Norbury, Ross and Redwine, censors for this meeting.

The election of officers resulted as follows: F. P. Norbury, Jacksonville, president; F. H. Russell, Eldred, first vice-president; J. T. Williams, Jerseyville, second vice-president; H. A. Chapin, White Hall, secretary and treasurer. Censors, H. W. Chapman, White Hall; G. W. Ross, Carrollton; Waldo Fisher, Alton.

A very interesting and instructive paper on "**Adenoids**" written by A. L. Adams, Jacksonville, was read by Dr. Norbury. J. B. Hayes was elected to membership. Censors reported Jerseyville as next place of meeting with T. J. Pitner, F. A. Clement and F. H. Russell as essayists. After reports of cases and discussion, the Society adjourned.

H. A. Chapin,

Official Reporter.

The Pike County Medical Society met at the office of H. T. Duffield in Pittsfield, April 23, 1903. Members present were H. T. Duffield, R. H. Main, L. J. Harvey, C. E. Beavers, Harvey Dunn, J. Smith Thomas, T. W. Shastid, F. M. Crane and R. O. Smith.

The following officers were elected: President, J. Smith Thomas, Pleasant Hill; Vice-President, F. Marion Crane, Pittsfield; Treasurer and Secretary, R. H. Main, Barry.

The above form the Judicial Committee.

By a vote of the Society, the assessment plan of the State Society was adopted.

F. M. Crane was elected as delegate to the State Society; R. H. Main, alternate.

H. T. Duffield demonstrated a "**simple application for fractures of the Clavicle**." The demonstration was highly appreciated by the members as it affords a simple bandage which seems to be perfect in every way.

Dr. Crane read a paper on "**Pruritus Ani**," with remarks on cause and treatment.

R. H. Main read a paper on "**the toxicity of methyl alcohol**" reporting cases of death and showing the prevalence of its substitution for grain alcohol in culinary and medicinal extracts, etc. He recommends that the Pure Food Commission take steps to drive these goods from the market.

R. H. Main, Official Reporter.

The Wabash County Medical Society met April 28, and as Secretary I am instructed to give you a report for publication in the State Journal.

It was an interesting and profitable meeting, giving evidence that this county is keeping in touch with medical progress. The Society adopted the assessment plan urged by the State Society. We are therefore in affiliation, and we believe most of our members will

see the wisdom and necessity for such co-operation of medical societies.

R. J. McMurray read an excellent paper on "**some rare obstetric cases**," of which he has had a considerable number with unusually fine results.

The subject of **Broncho Pneumonia** was opened by J. Schenck, giving the Society the benefit of his experience covering perhaps 30 years, which was very valuable. He was followed by nearly all present. We are being represented at the State Society by Norman Leeds.

I sent to Dr. Weis \$6.00, being membership fee to State Society, and subscription to the State Journal for the following: J. C. Utter, Mt. Carmel; G. C. Kingsbury, Mt. Carmel; C. E. Gilliatt, Allendale, of which I presume he will report.

We hope our medical bill will pass the house. The next meeting will be the fourth Tuesday in July.

G. C. Kingsbury, Official Reporter.

The **Hancock County Medical Society** met in Dr. Callihan's office Monday, April 20. Members present were Callihan, Nice, Ferris, Jenkins, Agler, Runyon, McClure, Reaburn and Casburn. Drs. Pumphry, Loomis, Waggoner, Thomas, Rook and Ditto petitioned for membership and were elected. Motion made and carried that we proceed to organize under the plan of the State Medical Society.

A committee consisting of Drs. Jenkins, McClure and Agler was appointed to correct and adapt the by-laws to the present needs of the Society.

It was resolved that hereafter the Society will meet regularly quarterly. A committee consisting of Drs. Casburn, Nice and Runyon was appointed to prepare a program for our next meeting, the first Monday in June.

The question of establishing a hospital by the County Medical Society at Carthage was very fully and generally discussed. All seemed to believe that the best interests of the physicians of the county and of the people of the community demand such hospital.

A committee consisting of Drs. Nice, Runyon, Jenkins, Pumphry and Casburn was appointed to investigate and consider the matter and report at the next meeting. Under the head of "election of officers" Dr. Nice was elected president, Dr. Runyon, vice-president; Dr. Casburn, secretary; and Dr. Callihan, treasurer. Dr. Jenkins was elected delegate to the State Medical Society, Chicago, April 29 to May 2, with power to select his own alternate.

R. L. Casburn, Official Reporter.

The **Rock Island County Medical Society** held its regular monthly and annual meeting at the Harper House, Rock Island, Ill., on Tuesday evening, April 14.

After partaking of a banquet, the meeting of the Society was called to order at 9 o'clock P. M. President, A. M. Beal, was in the chair. There were present twenty-four of the members of the Society. It being the annual meeting, the following officers for the ensuing

year were elected: President, W. R. French, Cordova, Ill.; First Vice-President, C. C. Carter, Rock Island; Second Vice-President, L. D. Dunn, Moline, Ill.; Secretary, T. J. Lamping, Moline, Ill.; Treasurer, Louis Ostram, Rock Island, Ill.; Official Reporter, G. L. Eyster, Rock Island; Delegate to Illinois State Medical Society, A. M. Beal, Moline; Alternate, C. Bernhardt, Rock Island.

The following papers were read:

Puerperal Eclampsia by W. H. Ludewig of Rock Island. The paper was a most interesting resume and comparison of the later literature and theories on this subject, the essayist rather favoring the theory that the etiology was to be found in a toxæmia from the placental site.

Puerperal Infection by T. J. Lamping of Moline was a carefully prepared discussion of the etiology and preventive treatment of infection of the puerperal woman.

Both of these papers were extensively discussed by Drs. Eyster, Carter, Craig, Sr., Beal and DeSilva.

A resolution endorsing the movement for the assessment of all members of County Societies as membership dues in the State Society, and instructing the delegate to support such action in the House of Delegates, was adopted.

The Society adjourned to meet on the second Tuesday in May.

George L. Eyster, Official Reporter.

The **Montgomery County Medical Society** met at Litchfield Friday, April 24, at which papers were presented on the following subjects: **Injury caused by railway wreck**, T. J. Whitten of Nokomis; **result of treatment of epithelioma by the X-Ray**, M. W. Snell of Litchfield; **rachitis**, J. M. Trigg of Farmersville; report of a case of Hodgkin's disease, W. A. Edwards of Raymond; **diphtheria**, F. W. Barry of Hurricane; **head injuries**, C. H. Lockhart of Witt; report of a case of **tetanus**, A. B. Carey of Donnellson; **pulmonary tuberculosis**, Amos Sawyer of Hillsboro.

Isaac W. Fink, one of the best known physicians of Hillsboro, died at his home in that city Tuesday, April 14, 1903, aged 78 years, 7 months and 20 days.

Dr. Fink was born at Jonesboro, Ill., August 24, 1824.

He received a common school education, supplemented by two years of instruction in the Hillsboro Academy. In 1850 he began the study of medicine with A. S. Haskell of Hillsboro, and graduated from the St. Louis Medical College in 1854, when he began the practice of medicine in Hillsboro. He practiced his profession here continually from that time until he was stricken with his last sickness, except one year; and was for many years one of the leading physicians of the county. He was a member of the national, state, district and county medical societies, the latter of which he organized and held the office of first president.

He was a member of the Congregational church and one of its principal supporters as long as they maintained an organization in this city. By frugality and thrift he had ac-

accumulated a fair competency and he was always ready and willing to do his share in advancing the material interests of the city. He was a man firm in his religious and political convictions, a man of excellent judgment, of unquestioned integrity and of the highest standing in the estimation of all who knew him. He was a kind husband, a loving and indulgent father and a useful citizen.

Official Reporter.

The Livingston County Medical Society held its fifth semi-annual meeting in Pontiac, May 7. Twenty members were present and B. F. Elfrink of Chenoa, and C. A. Potter, of Cornell were elected to membership. A committee was appointed to prepare an amendment to our constitution to conform to the new constitution of the State Society.

The following papers were read and discussed:

"Puerperal Eclampsia," H. H. Dally, Blackstone; discussion led by John Ross, Pontiac.

"Puerperal Infection," A. H. Thatcher, Fairbury; discussion led by O. A. Coss, Saunemin.

"Pneumonia in Infancy," Alexander Gray, Cabery; discussion led by J. J. Pearson, Pontiac.

"The Cocaine Addiction," C. L. Hamilton, Dwight; discussion led by H. F. Ballard, Chenoa.

"Some Experiences with the X-Ray," J. A. Marshall, Pontiac; discussion led by Geo. T. Carson, Chatsworth.

"Boon and Bane," W. L. Rabe, Dwight; discussion led by J. B. Baker, Pontiac.

Necrological report (L. J. Wisman), G. D. Lockie, Pontiac.

The following officers were elected:

President, T. O. Bannister, Odell; Vice-President, J. J. Stites, Pontiac; Secretary-Treasurer, John Ross, Pontiac.

The following resolutions were adopted:

Resolved, That, we the members of the Livingston County Society, express our appreciation of L. J. Wisman, his ability, his work, his noble resolution to become proficient in his chosen line of work, and above all his gentlemanly courteous conduct to all with whom he came in contact. We wish also to have his wife and family know that we appreciated Dr. Wisman while he was with us.

John B. Baker offered the following resolutions.

Whereas we have learned of the irreparable loss sustained by the respected president of this Society. Therefore be it

Resolved, That we sincerely condole with Dr. Otis in the recent death of his mother.

Resolved, That this heartfelt testimonial of our sympathy and sorrow be forwarded to our absent president, and also be placed upon the records of this Society by the secretary.

The board of censors made the following report:

We the board of censors do hereby prefer charges against W. L. Rabe of Dwight, for unprofessional conduct.

John Ross, Official Reporter.

The Sangamon County Medical Society held its regular monthly meeting in the supervisor's room at the court house, May 11, 1903, at eight-thirty o'clock, with A. L. Brittin, president in the chair and fourteen members present. The minutes of the April meeting were read and approved. The application of B. F. Redshaw of Curran was read and after being balloted upon was declared elected to membership. The applications of J. R. Burkhart and Hada M. Burkhart were rejected and the secretary-treasurer was authorized to return fees of applicants. The applications of James L. Lowrie of Lincoln, and Harley Strohl of Zenobia were read and referred to the committee.

The literary exercises consisted of an excellent paper on **acute gastro enteritis in children** by C. R. Spicer, a synopsis of which follows. More children under five years of age, die of this, than any other disease except pneumonia, it has in the last four years caused 17 per cent of the deaths, in this city. The causes may be divided into predisposing and direct, of the former, the most important are, age, food, temperature and irritation which is of minor importance. Of the direct causes, over feeding, improper food, chill and the bacteria.

The symptoms are, watery diarrhea, marked depression, often delirium irregular temperature, 104 to 106, there may be head retraction, grinding of the teeth and Kernig's sign, the abdomen is flat, marked wasting, features sharp, muscles flabby, in infants the fontanelle depressed, and the skin wrinkled, the heart's action usually weak, extremities become cold, the skin clammy and death following as a result of intoxication.

The four chief indications to be met in the treatment of acute gastro enteritis are: prophylaxis, the emptying of the gastro-intestinal tract, the inhibition of the growth of bacteria in said tract and the support of the patient. The thorough washing out of the stomach is of great benefit in these cases, after this an active cathartic should be given, the writer prefers castor oil. The bowels should be flushed thoroughly using at least a gallon of water, this should be done twice daily as long as the green stools and fever continues. For the inhibition of bacterial growth in the intestinal tract bismuth subnitrate is recommended. Great care must be exercised in feeding the little patient during the convalescent stage.

In the discussion B. B. Griffith said, with the anxiety of the parents these cases were hard to handle, the flannel bandage over abdomen for protection is of great importance, he also spoke of good results from spice poultice and flushing of bowels with large quantity of salt water.

L. C. Taylor stated that he had seen a few cases in which it was difficult to tell whether the primary trouble was in the meninges or bowel. He prefers small doses of calomel to eliminate the poisons. Suspension of all food, even temperature and minute doses of an opiate to check the extreme peristalsis are points to be carefully watched.

M. T. Kelly said, "like diphtheria it is a poor man's disease," cleanliness must be ob-

served, bismuth subnitrate is a protection as well as an antiseptic, flushing the bowels with silver nitrate 1-10,000, and inunctions of cod liver oil have been successfully used.

S. E. Munson stated, the treatment for acute and chronic enteritis was quite different, bismuth in the chronic form does not always act well, castor oil or calomel is of great benefit, of the important things to watch are even temperature lavage of the stomach modification of milk and sometimes the malted foods will relieve constipation. The milk should be prepared as soon as possible after being drawn.

S. R. Hopkins does not think the teeth have very much to do with enteritis.

G. N. Kreider thinks the artificial foods do not receive the endorsement of the physicians as they did, he said that 20 years ago enteritis was much more prevalent than now, because people are learning how to feed their children, he also spoke of bananas being rank poison to some children.

A. L. Brittin thinks the lay people should be educated along the line of infant feeding also stated that the per cent of mothers not able to nurse their babies is very small, and the per centage of mothers who think they are too weak to nurse their babe is quite large. He thinks condensed milk is a vicious food for babies.

C. H. Walters has had good results from minute doses of arsenate of copper.

Percy Taylor,

Official Reporter.

The De Witt County Medical Society held its annual meeting in the county court room, April 14, 1903. Convened at one o'clock P. M. A. E. Campbell in the chair. The minutes of the last meeting read and approved.

Guy G. Dowdall's application was presented and referred to the censors, who reported favorably, the doctor being declared a member of this Society, and entitled to all its benefits.

A communication from Mrs. Mary A. Edmiston was read, thanking the Society for their beautiful floral offering at the funeral of her husband, Dr. J. A. Edmiston, who died, April 2, 1903. He was a member of the Society in good standing, and will be greatly missed from our ranks and in the community. Resolutions were then offered, expressing the feelings of the Society over his demise.

The Society proceeded to the election of officers for the ensuing year, with the following results: President, J. C. Myers; Vice-President, S. L. Thorpe; Secretary and Treasurer, J. H. Tyler.

A. E. Campbell was elected to serve as delegate to the State Medical Society held in Chicago, April 29, with Guy G. Dowdall as alternate.

L. Harrison Mettler of Chicago, addressed the Society upon "**The Differential Diagnosis and Treatment of the Cerebral Apoplexies.**" He deplored the use of the word apoplexy, as it gave no indication of the nature of the lesion. The proper diagnosis of an apoplectic stroke necessitates always the diagnosis, so far as possible, of the character and location of the lesion. This is all the more necessary

because it determines the character of the treatment to be employed both during the early or comatose stage and the later or hemiplegic stage. The first thing always to determine is that the stroke is due to a **cerebral lesion**. This of course involves a differential diagnosis between a cerebral lesion on the one hand and on the other such conditions as syncope, epilepsy, opium poisoning, acute alcoholism, uraemia, insolation, etc. The speaker referred only briefly to the essential points of difference between these various conditions.

The cerebral lesions that give rise to the apoplectic stroke are hemorrhage, embolism, thrombosis, concussion, laceration, congestion and senile degeneration. Of these the most important are hemorrhage and sudden arrest of the circulation by embolic or thrombotic obstruction. In both of these conditions the previous history of the patient is a most important factor in making a differential diagnosis. Heredity plays a small role in hemorrhage, none in embolism and thrombosis. On the other hand rheumatism, syphilis and other constitutional diseases play more of a role in the latter than in the former. Age of the patient helps to distinguish hemorrhage from embolism but does not help much to separate hemorrhage from thrombosis as both of these conditions occur in atheroma of the blood-vessels. Hemorrhage and embolism occur in a very similar way and must be separated largely by a diagnosis of the underlying conditions. For example, hemorrhage is due to miliary aneurisms, atheromatous blood vessels and fatty degeneration; embolism is associated with rheumatism and heart lesions, syphilis and other constitutional diseases. In the former three not apt to be any prodromata: the coma is sudden and profound; the paralysis is simultaneous with the coma; there is early rigidity; the pupils are unequal, contracted and then dilated; the pulse is hard, slow, then rapid; the respiration is stertorous; the heart action is strong, even violent; the head is turned towards the side of the lesion; the eyes are in a state of conjugate deviation, looking towards the lesion; the face is paralyzed as well as the limbs on the side opposite the lesion; the hemiplegia is severe and permanent; there is sometimes post-hemiplegic chorea and athetoid movements; late contractions occur; and finally vasomotor signs such as redness, elevation of temperature oedema and bedsores; anaesthesia is slight and not often noticed. In embolism there may be slight prodromata such as headache, transient weakness, tingling sensations and other paraesthesiae; onset more gradual than in hemorrhage; coma is not so severe nor so prolonged and may even be transient or absent altogether; the paralysis occasionally precedes the coma; convulsive movements instead of rigidity occur among the early symptoms; pupils less affected; likewise the respiration; the heart is apt to be weak and irregular in action and reveals a valvular lesion; no temperature disturbances; little or no conjugate deviation of the eyes; little or no deviation of the head; face less often involved; hemi-

plegia less severe or even quite temporary; the paralysis more distinctly localized; less chorea and athetoid movements; anaesthesia more noticeable; vasomotor signs slight or even absent. In hemorrhage aphasia is more common and less transitory than it is in embolic obstruction. In hemorrhage all the symptoms are more generalized, in obstruction they are more localized. In the former the bowels and bladder are more affected than they are in the latter. In hemorrhage the initial symptoms are sudden, extensive and profound with a retraction sooner or later; in obstruction the initial symptoms are not so sudden, extensive or profound but there is a slight extension or enlargement of them.

The greatest difficulty occurs in making a differential diagnosis between hemorrhage and thrombosis as both occur as a result of atheroma late in life. And yet a careful consideration of the formation of the lesion will suggest valuable differential signs. Hemorrhage is a sudden and thrombus, a gradual lesion. Therefore there are prodromata in the latter, none in the former. In the former the turgid face, the high arterial tension, the heart action, the occasional retinal hemorrhages, the general convulsions with profound paralysis, the greater degree of coma and the early fall of the temperature will help to distinguish it from thrombosis.

After thus indicating some points of differential diagnosis between these various forms of apoplexy or coma with paralysis, the speaker devoted a few moments to their treatment. The position of the patient was important, he said. In hemorrhage he adopts a half reclining position; in obstruction a completely prone position. In the former he lets the patient lean back in bed against an overturned chair-back; in the latter he removes all pillows and even elevates the foot of the bed by means of bricks.

All nervous strain must be removed, hence whispering in the room must be forbidden and loud talking, if it is necessary to speak in the presence of the patient, must be employed, so that in his anxiety he may not strain in order to hear what is being said. In hemorrhage bowels and bladder must usually be attended to; ice should be placed near the head and hot towels to the feet; free and prompt catharsis should be obtained with croton oil or elaterium; tincture of aconite and compression of the arteries of the limbs and neck will steady the pulsations; venesection is very rarely, if ever advisable; choking and asphyxia must be avoided by frequent cleansing of the mouth and letting patient lie on the paralyzed side so as to fill as much as possible the unaffected lung of the other side; alcohol and all stimulants must be avoided; trephining should be thought of if the hemorrhage is meningeal. On the other hand in obstruction by embolism or thrombosis, there is less need of attention to the bowels and bladder; the weakened heart should be supported with alcohol, ammonia, digitalis, strychnia, strophanthus, ether or nitroglycerin; venesection is absolutely contraindicated; violent catharsis must be avoided; absolute

rest must be maintained. The treatment of the after-effects, the aphasia and hemiplegia, are about the same in both cases. The speaker recommended early efforts at the re-education of the speech centers. He begins within ten days or two weeks to urge the patient to speak. The nurse is told to converse and thus encourage efforts on the part of the patient. In this way the aphasia will be more promptly and more completely recovered from. Tonic doses of strychnia, hypophosphites, etc., are good. Contractures and pains are best managed by warm local baths and gentle massage. Electricity is valueless except for its psychic effect. The internal organs must be watched and everything done to prevent vasomotor sequelae. A careful differential diagnosis, when it is at all possible to make it, between the various cerebral apoplexies and the treatment regulated in accordance with that diagnosis, will secure better results in the management of this protean trouble.

Bayard Holmes of Chicago, spoke of the **gall bladder, and its diseases.**

The president-elect announced the names of the censors for the ensuing year as follows: D. D. Barr, A. J. Tyler and Robertson.

On motion the Society adjourned.

J. H. Tyler, Official Reporter.

The Fox River Valley Medical Association held its seventy-sixth semi-annual meeting at Elgin, April 14, 1903. Geo. J. Schneider presiding and about 30 members being present.

A paper on **Melancholia** was read by C. A. Buswell of Freeport, which was discussed by H. J. Gahagan and F. H. Jenks.

Melancholia, like the other symptomatological varieties of mental disease, does not admit of an absolutely precise definition. A concise and complete definition to the general practitioner is by Clouston, "Melancholia is a state of morbid mental depression." Melancholia has its etiology, pathology, symptomatology, course and termination, the same as any other disease.

Depression will range from mere low spirits to the most acute delirious melancholia, and the different degrees have received different names. We read of simple melancholia, of delusional, hypochondriacal, religious, suicidal, excited, resistive, organic but there is no marked line of demarcation, and the patient may advance slowly or rapidly from the first to the last, and may be suffering from one or several of these forms at the same time. It is quite sufficient to know if the case is acute, subacute or chronic. It is characterized principally, by the mental depression. Yet all mental depression is not characteristic of melancholia. If we have a pathological condition from which is evolved a morbid state of mental depression, then we can safely say we have melancholia. There is a distinction between the ordinary and the morbid mental depression; the former is physiological, the latter pathological. Most men are subject to exacerbations and depressions of their mental temperament yet all men are not insane. When these reactions are quite out of proportion to the cause, or when the exercise of the

activity of the brain induces mental pain of a certain intensity, duration or kind, without any outside cause, then we conclude that the mental portion of the organ is disordered, and we say the patient suffers from melancholia. These two extremes are totally different and distinguishable but are so blended into each other that we have no absolutely definite scientific test to distinguish the line of separation.

Melancholia like the other forms of diseases of the mind must have certain environments or stimuli for its development. These may be classified as primary and secondary, or predisposing and active causes. When a patient suffers from melancholia, it is necessary to go back to the earliest possible history of not only the case but the parentage. Insanity principally, is born not made; so with melancholia, heredity has to do with a great part of its etiology. In every book we find heredity mentioned as one of the chief causes, ranging from ten to ninety per cent. This variance of opinion is no doubt due to the difficulty in tabulating statistics. Many families obstinately deny the fact that they have a hereditary tinge of insanity, and many families become so scattered it is impossible to reach them for the information. Peterson says, "heredity is encountered in fully one-half of the cases, of melancholia," and with my own experience in institutional practice, I should estimate that fully seventy-five per cent of the relatives who came to visit my patients showed hereditary symptoms which were family characteristics. And in one instance I now recall, we were compelled to parole a patient to her mother who was suffering with a far greater degree of insanity than the daughter.

Certain laws of heredity have been laid down by Darwin and others which have to be considered by those who have to treat of this subject, and they have been ably set forth by Dr. Mercier in his papers on the "Data of Alienism." "The first and most fundamental law of heredity is that every attribute of the parent tends to be inherited by the off-spring. Inheritance is the rule, non-inheritance the exception." You will notice that this does not state that every attribute is inherited, but tends to be inherited and will be, unless some opposing influence counteracts this tendency. This hereditary tinge may not be seen for several generations, or it may be recognized in the off-spring first then in one or both parents, grandparents, or great-grandparents, as the case may be.

Very closely allied to heredity there is an insane diathesis or temperament. This condition is recognized in that class of people known as "cranks" where there is an egotism constantly exhibited, they are suspicious of others, or their one thought is to get rich and get rich quicker than their neighbor, and if a loss should come they take it to heart and deplore their misfortune as if it were utter ruin. Others are subjected to various forms of fear, as hypochondria, etc.

In regard to sex, more females are suffering from melancholia than males; the ratio

is about 2 to 1. This is probably due to a greater instability of the nervous system in the female. The sexual troubles and such changes as are brought about by puberty, pregnancy, parturition and lactation, may also be added to explain this unequal ratio. The higher the degree of civilization, the greater the tendency toward insanity, so the most highly developed and specialized among civilized nations will be those in whom mental disease will be most commonly met with. The most lowly and savage races know nothing of the complicated emotions, ambitions, disappointments, pride intellectual success, and religious fanaticism which tend to unbalance the mind of many. This may not be all that should be added to the predisposing causes but is sufficient to give the reader a general idea of the kind of ground required for the development of the seed for not only melancholia but for the other forms of insanity.

In the consideration of the exciting causes of melancholia we must bear in mind the condition set forth above as predisposing causes. The key note of the exciting cause of melancholia is over strain. Melancholia is a disease of the mind, so this strain must be brought to bear on the mind to that extent to which it can no longer stand the strain and thus its equilibrium gives away to an unbalanced condition. In melancholia this unbalanced condition is characterized by depression. It matters not whether this over-strain is due to sexual excesses or self-abuse, epilepsy, alcoholism, syphilis, or mental strain (such as worry from business affairs), the condition is the same. It has been my experience that worry over love, religion and money head the list of these exciting causes.

The first and most easily recognized symptom of melancholia is the morbid mental depression; this varies from simple dejection to the most profound depression. The mental pain which the patient suffers varies as does the depression; some may suffer but little and remain strangely quiet, and still others may become noisy and make agitated demonstrations of grief. This depression may vary in the same individual due to perhaps harmonious or unharmonious surroundings or to physical derangements especially those of gastro-intestinal tract. The memory of recent and remote events is very much impaired, the judgment poor and almost void of reason with an exaggerated imagination. The contents of the thought is usually central about the depressive idea to which they always recur with great frequency recounting their misdeeds and the dreadful things to happen. Very often they show tendency to repeat certain phrases as, "Take me home, take me home." Few have but little will power, yet many are obstinate and show profound resistive tenacity.

The delusions of melancholia are as varied as the ideas the patients may possess, some having a few, others more; Clouston has found fifty-eight different delusions in a series of one hundred cases. These also may or may not be accompanied by illusions and hallucinations of sight, hearing, taste and smell. The

mental symptoms are closely in sympathy with the physical conditions; poor assimilation, poor elimination, with constipation, retaining the toxic conditions of the system greatly aggravate the mental symptoms and many times is the cause of an acute depression becoming a profound coma.

The physical condition of patients suffering from melancholia is generally below par. Their facial expression shows depression from the mental pain; the pulse is slow and retarded except in the agitated variety, then there is a marked degree of acceleration; the conjunctiva and fundus of the eye are pale, symptomatic of the anemic condition of the brain. Respiration is also retarded and often in comatose or catatonic conditions scarcely perceptible. Along the gastro-intestinal tract will be found the most difficulty. Tongue furred and coated, foul breath; gastric juice and saliva diminished; constipation is very common and as a result an elevation of temperature. Surface temperature, however, especially of the extremities is often much reduced. The tendon reflexes are increased as a rule but diminished in agitated varieties. Gray states that 54 per cent of a series of 175 cases early complain of a "post-cervical pain" which is variable in intensity, often extending to the occipital region. Females are very prone to amenorrhea.

The anatomical changes which have thus far been noted are only those of arterio sclerosis resulting in a functional nutritional disorder of the brain or cerebral anemia.

The course of melancholia is slow in its progress, and runs from three to six months in the most favorable cases, but a year or several years may elapse before recovery takes place. Ordinarily recovery is gradual but occasionally is rapid; in women the approach of convalescence is indicated by a return of the menstrual function. Melancholia terminates in recovery (90 per cent), recovery with defect, in death, in secondary dementia, in chronic melancholia, or a secondary paranoia. Death in the majority of cases is due to suicide, exhaustion, refusal of food, extreme sleeplessness, pneumonia and tuberculosis. In simple forms of the disorder the prognosis is very favorable indeed, and recovery can be predicted in from three to six months in about 80 per cent, to 90 per cent. of the cases. Clouston estimates recovery of 50 per cent. in first three months and 80 per cent. within a year. In the agitated variety less favorable and in the catatonic variety least favorable of all as regards recovery.

The medical treatment of insanity in its wider significance includes the employment of all the means at the physicians command for the control and the cure of the disorder. The first essential is the establishment of a "rest cure" which should include the removal of the patient from irritating persons as well as objects. Defendorf recommends that this be taken in bed, with short intermissions with constant attendance, but whether it be necessary to do this depends on the individual case. Next to forced rest is forced feeding or strengthening the physical conditions. The

patients, as a rule, have poor appetite or delusions pertaining to their food and if allowed to follow their inclinations in this direction they would soon meet with intestinal disorders. The food should be nutritious, given in small quantities and at frequent intervals; if necessary the stomach or nasal tube may be resorted to in order to maintain nutrition. All intestinal derangements should be corrected as early as possible and kept under perfect control throughout the course of the disease. The insomnia is best relieved by warm baths (90-100) if necessary use hypnotics of which alcohol, paraldehyde, bromides, sulfonal, trional are the most efficient. Many have treated the depression with increasing doses of opium and morphine with very good results, while others report it a failure. The general health of a melancholic should be cared for, by daily baths, electricity, cold spinal sprays, and massage. The psychical influence which may be constantly exerted over the patients by those in attendance, is of the greatest value in alleviating distress, modifying the delusions and relieving the anxiety. For this reason, the manner should be gentle, friendly, and assuring and attempts should always be made to lead the thoughts away from their depressive ideas; at no stage of the disease should the patient be deceived. In short, a systematic employment and training of the insane is the key note to modern treatment.

The following history of two of our patients recently admitted to Lake Geneva (Wis.) Sanitarium and for which I am indebted to Dr. Podstata who is in charge of the department for mental diseases.

No. 1. D. E. Personal history: Well, but undersized as a child; good student. Masturbated average once a week. Successful farmer. No venery. Single. Occasional glass of beer. History of illness: Mother died May, 1901. Worried, slept poorly since then. September, 1901, traveling quack induced patient to undergo treatment for masturbation. Patient signed note for \$60.00. Worried, doctor would "forge more on the note" and beat him out of his property. Lost sexual power. Improved during winter and became more cheerful. In spring again reads books on weakness of men, became depressed, slept poorly. Bowels constipated. June, 1901, claimed he was struck by lightning during night. Said it went through his head and came out of his heels. Two weeks later became suddenly worse; said the devil came for him; he was going crazy; there was no help for him; it was too late; rest of family would all die in disgrace and he would be left to wander about alive forever. Had a notion to go and hang himself in the barn, but made no attempts. Has hypochondriacal delusions. No hallucinations. Physical examination: Undersized man, fair nutrition. Weight 112 pounds. Enlarged inguinal glands. Internal organs negative. Knee jerks slight. No clonus, no plantar reflex. Skin dry, hard very scaly.

History since admission to Oakwood:

Eating poorly, quiet, orderly, apathetic, talks in monosyllables, motor inhibition.

July 20. Refuses to take nourishment altogether. Says he is all "stopped up." Fed mechanically. Mainly milk and eggs with laxatives and tonics.

September 23. Considerably brighter. Also in somewhat better nutrition. Eats voluntarily but must be urged.

April 1. Patient much improved both physically and mentally. Talks readily, plays cards, checkers and outdoor ball. Still has to be urged to eat more. Some depression still remains, but no suicidal ideas.

Principles of treatment: Mainly strict attention to elimination by means of laxatives and steam baths and tonics. Also carefully adjusted dieting.

No. 2. A. J., age 50 years. Family history negative. Personal history: Well as young man. Not drinking. No venery. Hard worker. History of present illness: About three months ago started to worry about his business. Thought he was going to lose his farm. Lost in flesh; slept poorly; ate poorly. Attempting to strike one of his best friends, imagining he was against him. Had suicidal tendencies. Many delusions of fear and of impending danger. Admitted March 14, 1905.

Physical examination: Some emaciation. Skin dry and hard. Arterioles and venules enlarged in face, also over body. Varicosities. Varicocele of medium degree. Internal organs negative except nervousness of heart. Tongue badly coated. Constipation. Urine high sp. gr. Urates, uric acid. Indican in excess. No. A. No. S. deep reflexes increased. Eye reflexes normal. Patient much depressed. Restless with no definite object. Talks in monosyllables. Repeats sentences. Thinks he is an evil man and deserves punishment. Is surely going to lose all his property. All his people are going to perish on his account. He is to be sent to prison. Appetite poor. Refuses medicine often, not always. Says the medicine tastes like blood, probably of his people. Talks much of suicide.

History since admission: Eating better. Interested more in surroundings. Talks more freely. Depression still present, but less severe. Shows no suicidal tendencies at present. Had to be fed by nasal tube at first. Principles of treatment: Increase and maintain elimination by bowels, kidneys and skin. Tonics. Increase general nutrition by dieting.

Summary:

1. The symptoms are depression, post-cervical ache, with or without delusions.
2. Prognosis is favorable in about 80 per cent 90 per cent as to recovery.
3. Course of disease from three months to several years.
4. Treatment: (a) Protection of patient by proper attendance or in hospital for insane. (b) Rest, proper and sufficient nourishment by forced feeding, if necessary. (c) Regulate bowels and all avenues of elimination. (d) Sufficient and restoring sleep.

A paper on the life of Dr. E. P. Cook, who was an honorary member of the Association, was read by J. W. Pettit of Ottawa. J. G.

Tapper added remarks dealing chiefly with his boyhood acquaintance with Dr. Cook.

Dr. Edward Pumpey Cook.

There is a propriety in recounting on occasions like this the virtues and achievements of those whose lives have been useful or illustrious. This is proper not only for the purpose of paying tribute to their memories, but of utilizing their good examples of life in rendering better the lives of those who survive them. . . I know it is commonly said epitaphs and tributes study only to speak well of the dead, but in the case of our departed brother E. P. Cook, it is simply impossible to speak truthfully, without speaking words of praise—words which to those who did not know him would appear extravagant panegyric. The rule is to say naught but good of the dead. A better rule is to speak nothing of the dead save that which is true. Undeserved eulogium and fulsome flattery, like calumny and slander, are not fitted for the grave. It is the latter rule which I shall seek to observe in speaking of Dr. Cook. In doing this I will follow his example for frankness and honesty by never stooping to a shadow of untruth, however, possibly the excuse for it might appear to be.

It was my good fortune to have Dr. Cook for a friend. I became acquainted with him on the threshold of my professional career. The acquaintance formed thus early ripened into a warm and generous friendship which was never interrupted by a hasty word, or unpleasant incident. I accepted him as my mentor, and I am thankful to the members of this society for the privilege of paying a tender, and affectionate tribute to his memory.

It is not my purpose to give a biography of Dr. Cook, but rather to call attention to the beautiful symmetry and unusual force of his character. He was a great man. Not great in performance of illustrious or heroic deeds. Not great measured by the usual standards of greatness, but great in rising above and superior to his environment as a country physician. Great in rising above the petty cares and dwarfing tendencies of a country practice and making his influence felt throughout the length and breadth of this great state. It is no exaggeration to say, that if we except a very few medical teachers in the city of Chicago, no man in the profession has exerted a greater influence for good in this state than Dr. Cook. I am sure no one who knew him intimately will call this statement in question. Dr. Cook's greatness consisted in using the ordinary opportunities of life, such as are presented to the average country physician, to make himself preeminent in his profession and thus achieve distinction for himself. His professional career was a conspicuous example of what a country physician who is imbued with a proper spirit may do for himself and his profession, and still remain within the narrow sphere which fate or choice has ordained for him. This is the distinguishing feature of Dr. Cook's professional life and the one from which we, his co-laborers, should draw our greatest inspiration. He was the most symmetrically developed physician I ever

knew. Every side of his character was equally well developed. Graduating at a time when the advantages for a medical education were very meagre he more than made good the deficiency by study, and intercourse with the best medical men of his time. Although practicing in the country where his opportunities for surgical work were extremely limited, he kept pace with the rapid strides in surgery, successfully performing major operations, of whatever character, that fell to his lot. Notwithstanding the fact that he always had a very large practice, such an one as usually consumes the entire time and energies of most physicians, he found time to regularly attend the several medical societies to which he belonged. So regular was he in his attendance that if by chance he should be absent those present immediately made inquiry as to his health, knowing that sickness, not business, was the cause of his absence. In this connection I must record the remarkable fact that for thirty-seven years after joining the State Society, he missed attendance upon only one meeting and that was because of sickness in his family. He was equally faithful in his attendance upon local societies. It was in medical societies of which he was a member where Dr. Cook exerted his greatest and most beneficent influence. While he was honored by the bestowal of the highest offices in every society to which he belonged, his work in those bodies was ever and always an unselfish devotion to the best interests of his profession and not for personal aggrandizement. In his long career he never sought an honor however great, or shirked a duty, however arduous or insignificant. His unselfish devotion to duty and his clear perception of what was right made him a natural leader. No member ever questioned his motives and the cause which he espoused was rarely, if ever defeated. Dr. Cook was not only a tireless worker himself, but he had rare tact in making other men work. Many and many are the men in this state whose usefulness would have been lost to the profession, but for the fact that they were not only encouraged, but forced into active work by that commanding, yet gently persuasive way so characteristic of him. Unlike many of us, especially in these latter days, (be it said to our discredit), he did not seek the honors of the profession but sought to honor it and in so doing achieved greater and more lasting fame than those who seek to advance themselves by devious methods. For forty years or more Dr. Cook was one of the most active members of the State Society. His influence was felt in every advancement that body has made, and I believe the records will show that in every progressive movement made by that society, that Dr. Cook served upon the committee to whom the matter was referred, and that where there was any doubt as to the course to pursue, his advice was always followed.

Dr. Cook without question exerted the greatest influence of any member in all the medical organizations to which he belonged and he cannot possibly be missed, even by the members of his own family more than he will in medical

society circles. Not only for his great wisdom in directing professional affairs, but for his genial companionship which came as a benediction to all whose good fortune it was to come within the range of his influence.

If I had the ability of an Ian McLaren and were to attempt to portray the character of the ideal physician as it should be made to fit into this bustling practical age, it would be along the lines suggested by the life and character of Dr. Cook. He was forceful yet gentle, practical without being brusque, commanding without being autocratic, a leader without being a dictator. He was a great physician, by being more than a physician—a man of affairs taking an active and leading part in civic, church and social life. As a physician his life was an inspiration to the young and example to us all.

His was a most symmetrical and well-rounded life measured by any standard which might be applied. Estimated by comparison with his contemporaries, and measured by the limitations which he overcame, his career cannot be considered otherwise than as extraordinary and of singular distinction.

I should do injustice to my own feelings were I simply to employ this occasion in a formal estimate of his intellectual powers and strength of character, grandly developed as these were, or in measuring the value of his wise counsel and great usefulness. Great as he undeniably was in all the attributes which at once excite our admiration, he seems greater to me now as the friend, as the generous, kindly, helpful companion, than as the physician.

Could I with delicacy recall in this presence the numerous and emphatic acts of kindness on his part with which our intercourse was illustrated the recital would attest and justify my individual sorrow at his loss. Boundless as his genial good nature and tenderness for others always were, these qualities seemed to be notably conspicuous as his useful and honorable career drew to a close. It will ever be one of the sweetest and choicest of the memories which come to me, that within a short time of his death he spoke cordially of our friendship, and of myself personally in terms that I can never worthily acknowledge, or ever hope to deserve.

Thus once more we pay farewell honors to one who was a leader among us, whose talents challenged our admiration, and whose candor and amiability of nature and tenacious fidelity to duty will continue an example worthy of emulation through all coming time. When the medical history of this state is written in coming years no name will stand out more conspicuously than that of E. P. Cook. In his death we have lost an able physician, a true high-minded man, a character of lofty integrity, a good friend, the memory of whom time may possibly dim, but with me can never efface. We honor ourselves by paying tribute to his memory.

The board of censors reported favorably on the following all of whom were elected to membership to the Association:

F. C. Schurmeier, Elgin, Julia Meiklejohn,

Elgin, W. C. Bridge, Elgin J. B. Tobin, Elgin, J. I. Wernham, Marengo, H. H. Bay, Crystal Lake. E. W. Weis of Ottawa, was made a member by invitation.

The secretary read a communication from the president and secretary of the State Society asking that action be taken at this meeting on the proposition to make one due payable to the local society sufficient to cover dues of the State Medical Society and the American Medical Association.

The following resolution was offered which was tabled after some discussion: Resolved, That the delegate to the Illinois State Medical Society be instructed to favor the assessment of a *per capita* tax on the local societies of \$2.00 per annum the same to become effective in May, 1904.

Amendment presented at last meeting to raise dues from \$2.00 to \$3.00 was lost. Meeting adjourned.

Banquet was afterwards held in the Universalist church parlors at which place the program for next meeting was announced as follows:

Paper, subject not given, J. W. MacDonald, Aurora; **Arthritis Deformans**, Julia Meiklejohn, Elgin; **some Eye Topic**, Clark W. Hawley, Chicago.

President appointed Frank H. Jenks delegate to the State Society. Frank H. Jenks,
Official Reporter.

The Physician's Club of Chicago held its regular monthly meeting at the Sherman House, April 27, 1903, Frank Allport served as chairman. The topic for discussion was "**the Indian question in the United States.**" The attendance was unusually large.

The first speaker, G. Frank Lydston mingled much humor and seriousness with his remarks. He criticised quite sharply, some of the methods of the government in its dealings with the Indian. Especially to be condemned is the "reservation" system, where the tribes are huddled together, closely hemmed in and exposed to the greed and ill-treatment of vicious agents. The Indian was not given a chance to become civilized. He was deprived not only of his rights but was even forced to live and thrive as best he could on land that no white man could live upon. He was cheated, robbed and even ruthlessly butchered. Is it any wonder that he hates the white race and attacks it whenever the opportunity presents itself. The Indian is the original owner of the soil and deserves at least fair treatment from the Anglo-Saxons. He should be treated more honestly; allowed to become civilized by association with better classes of whites and by proper methods and education, and above all he should be treated as a man with all the desires, feelings, rights and privileges of a citizen of the United States. Until such a view is adopted by the government and its agents, there is no hope of a solution for the Indian question, except that of complete annihilation.

The second speaker was the Hon. W. A. Jones of Washington, D. C., commissioner of Indian affairs. He replied in part to the strictures

of Dr. Lydston against the government by saying that they were partly true and partly not true. Like Dr. Lydston he did not approve altogether of the "reservation" system. The wrongs done to the Indian of which Dr. Lydston spoke were the wrongs committed by agents whom the government did not in the least uphold. Mr. Jones believed in work as the *sine qua non* to the settlement of the Indian difficulties. Education is good, especially if given to the young and especially if along the line of cultivating a taste and habit for work and self-support. In every way, sometimes by neglect, sometimes by direct assistance, the Indian must be taught and brought to see that work and not idleness is his only salvation. Therefore proper tools, land and instruction are given him and if he shows a disposition to use them properly he is encouraged to go on. If on the other hand he is absolutely incorrigible, irredeemably, filthy, lazy and vicious, neglect in regard to giving him further assistance and a close watch upon him lest he do harm to others is the best thing that can be done for him.

Dr. Carlos Montezuma made an eloquent plea for the Indian. He pictured the tribes as many of them are living today and compared their members with those Indians who had been taken in childhood and educated at such schools as the one at Carlisle, Pa. He advocated most strenuously allowing the Indian the right to mingle and grow up in the midst of the white race; to go to their schools; to learn their industries, and in a word to be allowed all the rights and privileges of every other American citizen. Describing some interesting illustrative cases, he ended by saying that when a white man goes out to live upon one of these reservations he soon becomes an "Indian," whereas when an Indian is brought in among the white race and grows up then he becomes a civilized "white man." There is the solution of the whole problem. There is the indication which if followed by the government would soon put an end to all of the Indian troubles.

Mr. Lockwood of Minnesota read a brief but interesting paper explaining some of the poetical ideas, mythology and sign language of the Indian of the northwest.

Mr. Honore J. Jaxon, secretary to Louis Riel and the Metis or Federation of French Indians of the northwest, spoke most eloquently of the relations between the white and the red man. He contrasted their ideas in regard to civilization, growth, development, religion, brotherhood, etc. He argued that the white man's civilization was dominated by the intellect and with it went all the vices of a pure intellectual development such as greed, over-ambition, conflict, class distinction, hatreds, etc. Intellectual development is good and even necessary, but it represents only a halfway stage in the upward growth. The Indian on the other hand has all the primitive, nomadic virtues and vices which are mostly within the sphere of the feelings. His ideas of right and wrong, of religion, of truth, of patriotism, of brotherhood are stronger than the white man's because they are still un-

clouded by the overwhelming development of the purely intellectual qualities. The Indian, like the white man is also only at a stage,—perhaps a lower stage than that of the white man—in his upward development. The ideal is still in front of both races. If the good of both could be retained and the vices thrown away, the ideal race would come into existence. The primitive ideas of the Indian will add somewhat to the white man's civilization and vice versa. Amalgamation and mutual education would therefore seem to be the ideal solution of the problem. Such ideal, however, can only be looked for in the far future. Before that time both races must learn better by hard lessons. The Indian is learning them and the white man too; the former by his bad and cheerless existence in the forests without the comforts of machinery and inventions and other intellectual aids to physical and mental ease, the latter by his troubles of the commercial and industrial worlds, his strikes, his courts, his social wrongs and all those revolutionary outbursts which indicate the want of primitive equality and brotherhood in so-called modern civilization. The last speaker, Dr. H. B. Favill spoke briefly of the unhappiness brought upon the Indians by the vicious agents of the government. Of course the government is not always responsible for the acts of its agents, but most of the Indian troubles are to be laid at their doors.

L. Harrison Mettler,
Official Reporter.

Marriages, Deaths and Changes of Address.

Marriages.

Wm. A. Campbell, Chicago, to Miss Jeannette E. Halstead, at Muskegon, Mich., April 15.
Nathan Porter Colwell, to Miss Agnes Louise Peterson, both of Chicago, May 5.
Chas. E. Pinckard, to Miss Mary Losey Graff, both of Chicago, April 25.
Edw. K. Lockwood to Miss Stella J. Gelder, both of Virden, May 20.
Frank J. Leavitt to Miss Helen L. Harris, both of Chicago, May 13.
A. B. Howatt to Miss Mabel Lewis, both of Chicago, May 14.
John L. Irwin of Chicago to Miss Sara D. Drybough of Toronto, Ont., May 6.
Albert S. Stuttle, to Miss Pearl Jones, both of Williamsville, April 29.
Guy B. VanZandt of Montrose, Ill., to Miss Lucille Cuddy of Allan Reed, Texas, at St. Louis, Mo., April 9.
John Calvin Young of Roanoke, Ill., to Miss Elizabeth May Monser of Wenona, Ill., May 6.
Arthur A. Dearduff, Chicago, to Miss Birdie Catherine Doherty of Marshall, Clark Co.

Deaths.

Cassidy, Geo. P., Shawneetown, May 14, aged 43.
Craig, James D., Rogers Park, Chicago, April 13, aged 70.
Fink, Isaac W., Hillsboro, aged 78.
Ludlow, Edmund of Paxton, at Los Angeles, Cal., April 5th.
McAlpine, A. M., Peoria, April 27, aged 45.

McChesney, Alfred B., Chicago, May 7, aged 76.
Mix, Henry A., Oregon, April 22.
Silvers, Geo. M., Chicago, April 15, aged 43.
Symon, Geo. C., Chicago, May 21.
Tuthill, Daniel H. S., Chicago, April 18, aged 43.
Waters, L. C., Chicago, April 30, aged 54.

Changes of Address.

CHANGES IN CHICAGO.

Bidwell, T. S., 482 Ashland blvd. to 69 Laflin st.
Bell, J. J., Fullerton and Clybourne ave. to 342 E. Fullerton ave.
Colditz von G. Thompson, 269 Lake View ave. to Cole, S., 3305 Vernon ave. to 4246 Vincennes ave.
Cory, A. L., 4101 State st. to 47th and Wabash ave.
Collins, D., 447 26th st. to 4562 Indiana ave.
Eisenstaedt, S. 5434 Monroe ave. to 4619 Vincennes ave.
Foster, A. H., 779 W. Monroe st. to 940 Madison st.
Frankenthal, L. E., 4800 Kimbark ave. to 4825 Woodlawn ave.
Gillmore, R. T., 460 E. 63d st. to 488 E. 63d st.
Hagey, H. H., Wentworth ave. to 4191 S. Halstead st.
Harpole, W. S., 157 E. 47th st. to 4827 Madison ave.
Kahn, A. D., to 103 State st.
Lyman, H. M., 200 Ashland blvd. to 751 Warren ave.
Martin, James G., 1027 Warren ave. to 776 Walnut st.
Morf, Paul F., to 318 Webster ave.
Pratt, Augustus, to 41 State st.
Porter, Mary O'Brien, 1412 Jackson blvd. to 1439 Jackson blvd.
Porter, J. L., 4707 Lake ave., to 5037 Madison ave.
Porter, Wm. A., 1412 Jackson blvd. to 1439 Jackson blvd.
Potter, W. E., 623 Forest ave.
Richter, A. J., 4650 Grand blvd. to 4836 Calumet ave.
Royce, W. S., 46 Palmer ave. to 1485 Jackson blvd.
Stevenson, A. F., Presbyterian Hospital to 398 LaSalle st.
Tice, Frederick, to 1496 W. Madison st.
Watkins, T. J., to 103 State st.
Wells, Edward F., 47 and Kenwood to 4744 Woodlawn ave.
Wells, J. L., 3214 Malden st. to 267 Michigan ave.
Wylie, J. S. M., 1308 Masonic Temple to 1410 Masonic Temple.

CHANGES IN ILLINOIS.

Bartell, H. W. F., Bensenville to Wooddale.
Cox, C. P., Farmer City to Joliet.
Freas, F. L., Worthington, S. D. to Milledgeville.
Frankhouse, J. L., Peoria to Elkhart.
Hart, J. D., Dongola to Rock.
Holke, J. T., Tallula to Bluff Springs.
Patchen, C. C., Chandler, Okla. to Havana.
Stewart, Chas. H., St. Louis, Mo. to Belleville.
Wright, John, Roseburg, Ore. to Clinton.

CHANGES TO CHICAGO.

Beilstein, F. W., from Morton to 51st and Laflin streets.
Durkee, W. H., from Thompson.
Kirkpatrick, E., from Joliet.
Schlesinger, M. L., from El Paso, Texas.

CHANGES FROM CHICAGO.

Hunt, E. S., to Rockford.

Lemon, H. K., 774 E. 47th st. to Goshen, Ind.

CHANGES FROM ILLINOIS.

Hanson, Ralph, from Lewistown to Spokane, Wash.

THE NEW METHOD OF TREATING TYPHOID FEVER.

Benzoyl-Acetyl Peroxide, or Acetozone as an Intestinal Antiseptic, in Typhoid Fever.

Frederick G. Harris, of Chicago, (*Therapeutic Gazette*, March, 1903) reports 128 cases of typhoid treated in Cook County Hospital, Chicago, with Acetozone. The cases first admitted seemed to indicate that the epidemic was of a mild form, but later the disease proved to be of a severe type and complications were numerous. The author obtained the most satisfactory results with aqueous solutions of 15 grains to the quart which the patient's were urged to use very freely to quench the thirst, while in addition four to six fluidounces of the solution was given every four hours as a therapeutic measure. The movements of the bowels were regulated with sodium phosphate or magnesium sulphate.

The temperatures of the patients, on admission, were high, as a rule. In 117 cases under Acetozone treatment the average duration of the fever was 18 days.

The number of recoveries was 117, or 91.4 per cent., while 11 patients died, a mortality of 8.59 per cent.; statistics of the cases of typhoid fever in the same hospital (Cook County), not treated with Acetozone show a death rate of 13.1 per cent. The author is of the opinion that under the Acetozone treatment, in favorable cases, the duration of the disease was materially shortened, and the most disagreeable symptoms were ameliorated. He declares that the characteristic fetor of the stools and the peculiar odor of the wards was greatly diminished; there was less stupor and delirium and less tympanites, and, the usual diarrhea was checked. An average of 138.12 grains of Acetozone was used in each case. Finally he reaches the conclusion that when cases can be seen during the first week of the attack and large amounts of Acetozone given, assisted by a gentle laxative, the temperature will return to the normal in from ten to twelve days.

Results of the Vaccination of the Police and Firemen of Indianapolis.

(Report furnished by Secretary of State Board of Health.)

City Police Surgeon Garstang, assisted by Leonard A. Ensminger and H. Clay Meek, in accordance with an order of the Board of Public Safety, vaccinated all the police and firemen of the city. The work was commenced January 7 and finished in two days. Mulford's tube vaccine was used. One hundred and seventy-five firemen and 181 policemen, 356 in all were vaccinated. Of this number 53 were never vaccinated before, and 13 had had small-

pox. Not one of those who had had the disease responded to vaccination, and of the 53 unvaccinated, all but 3, 94.3 per cent. took finely. These three, though repeatedly vaccinated, could not be made to respond. Two hundred had been vaccinated previously at periods varying from 4 to 40 years. Twenty-eight of these did not take after repeated trials. All of these 28 had good scars, and had been operated on within the last ten years. Of the 262 secondary successful vaccinations, 231 had pronounced takes, (over 88 per cent. of takes.)

One of the policemen, thirty-eight years old, a neurotic, was very sick with his vaccination and lost fourteen days from duty. Outside of this case only 21 were off duty, the total time lost being 46 days. Some of this lost time was due to coincident attacks of la grippe. Every precaution was taken against infection, and while there were ten severe takes, there was not a case of ulceration or sloughing. Although the duties of firemen and policemen bring extraordinary exposure, still not a case of smallpox has appeared among them.

Hyperchlorhydria, a Symposium.

The June issue of the "International Medical Magazine" will be devoted to a symposium on this most important gastric subject, than which none more important has ever been published in any American journal. More than half a dozen of the leading European specialists will contribute, among whom are:

C. A. Ewald, Berlin.

George Hayem of Paris.

Carl Von Noorden of Frankfurt.

L. Kuttner of Berlin.

Rosenheim of Berlin.

The contributors from this side of the Atlantic are:

John C. Hemmeter of Philadelphia, on "An Experimental and Clinical Study of the Etiology of Hyperchlorhydria."

Allen A. Jones of Buffalo, on "The Effervescent Test for Gastric Acidity."

Boardman Reed of Philadelphia, on "A Further Development of the Benedict Effervescent Test of Gastric Acidity."

John A. Lichty of Pittsburg, on "The Relation Between Hyperchlorhydria and Neurasthenia."

Fenton B. Turck of Chicago, on "The Treatment of Hyperchlorhydria."

A. Robin of Newark, Delaware, on "The Etiology of Hyperchlorhydria."

Max Einhorn and others.

In Their New Home.

The Eastern Office of The Abbott Alkaloidal Co. is now located at 50 West Broadway, New York, formerly Broad St. Their eastern business has increased so rapidly within the last year, under the management of Mr. N. B. Harris, that large and more commodious quarters were necessary. Friends will receive a hearty reception from Mr. Harris at any time in the new home.

Not Opiates But Antiphlogistine.

Pain is the greatest instrument of torture with which the practitioner has to contend.

It is the one symptom to which the laity attach the utmost importance. Absence of pain is to the patient always suggestive of improvement. Its presence especially in uterine affections causes apprehension of operation and for relief of those cases who will not submit to operation and in inoperable conditions, Antiphlogistine strongly recommends itself, not only as a palliative measure but an excellent remedial agent. This fact has been successfully demonstrated by the gynecologist. Its value in acute and chronic conditions of the ovary and uterus is prompt, permanent and certain.

Two different methods of application are permissible, each exercising a distinct function in therapeutics.

During menstruation the introduction of any medicinal agent into the vagina is contraindicated and at this period the pain of catamenial irregularities can best be controlled by applying Antiphlogistine over the abdomen warm and thick and covering with cotton and a compress. This practice persisted in for several periods prevents headache, lumbar pain and other vicarious concomitant symptoms. Many women who have been physically incapacitated for a day or two each month have been permanently relieved by systematic use of Antiphlogistine at each menstrual illness. A potent influence is exerted over the sympathetic system which is so intimately associated with the physiological functions of the uterus that efferent stimulation neutralizes afferent irritation.

In the interval between menses, Antiphlogistine is successfully applied to the cervix of the uterus in the following manner. Make a small gauze sack and fill it with Antiphlogistine slightly larger in volume than the ordinary cotton tampon. Tie a string around the improvised sack and pass the Antiphlogistine tampon with dressing-forceps through the vaginal speculum to the os of the uterus, molding around the cervix. Through the induction of osmosis and dialysis of inter-cellular fluid, intra-mural tension is quickly reduced, local analgesia and undisturbed cervical drainage follow. For relief of a patulous uterus, the indurated cervix of endometritis and all irregularities of menstruation including amenorrhoea and dysmenorrhoea, this treatment is far superior to the ordinary glycerine tampon, rendering marvelous results to the clinician and patient.

New Incorporations.

Secretary of State Rose has licensed the following corporations:

Progressive Institute of Occult Sciences, Peoria; not for profit; for education in palmistry and psychic phenomena. Incorporators: Benjamin E. Sterling, Charles W. Finch and Ada Adams.

Dr. F. Formanek company, Chicago; capital, \$5,000; manufacturing drugs and patent medicines, incorporators: Fred Formanek, Joseph P. Vesely, Abe Greenfield.

Lowenthal Sanitarium, Chicago; capital \$2,500; care and treatment of invalids; incorporators: Albert A. Lowenthal, George S. Dixon, T. H. Dyer.

Oglesby Hospital association; incorporators: Mary A. Bradley, Susan H. Abel, Annie E. Hoppling.

Sisters of the Holy Cross Hospital association, St. Joseph county, Ind.; capital, \$10,000; capital in Illinois, \$1,500.

Embalmers' Bill Disapproved.

The governor disapproved the embalmers' bill regulating the practice of embalming and the disposal of dead bodies and for a system of registration and licensing of embalmers. The bill provides that embalmers must take an examination before the State Board of Health and pay therefor a license fee of \$5. This examination shall be conducted by a committee appointed by the State Board of Health consisting of three licensed embalmers and two physicians who shall receive \$10 per day and expenses during the examinations.

The governor says that it seems to him this board or committee, as it is called, is unnecessary. Embalmers are now licensed by the State Board of Health. He sees no reason why an additional board should be created with additional expense for this purpose. He says the bill does provide that the expenses of the examining board shall be met from the fees paid by the applicants, but there is no provision which precludes the possibility that later on this board or committee would not call on the state for an appropriation for support.

He believes the Board of Health is willing to do all the work of this kind necessary to the preservation of public health. The other objection to the bill is that it seeks to provide a board not composed of state officials in the proper sense of the term. This bill is not so objectionable on this ground, he thinks, as the nurses' bills, as the committee on examination is not to be selected by the governor from nomination made by some state society. The fact still remains, however, the governor says, that this embalmers' board is a board appointed, holding office and subject to removal under a system not recognized by the constitution. The constitution provides for the appointment of state officers by the governor. This act provides for a board to be appointed by another board. He quotes a number of decisions of the supreme court in support of his position on this point and concludes that if the general assembly wishes to create a board or set of officers holding office for a fixed term of years and does not desire the governor to appoint them by and with the consent of the senate it should provide for election by the people. The governor's last paragraph is:

"The doctrine and policy of having a board appointed and removable by another board is a new departure in Illinois. I do not believe it to be wise and accordingly withhold my consent from this bill."

SPECIALISTS.

X-RAY APPARATUS AND SUPPLIES: Finsen
Sun Lenses, Photo-Therapy Appliances,
Massage Vibration Equipments, Arc
and Incandescent Light
Cabinets.

**ALL TYPES OF CROOK'S TUBES AT LOWEST
MARKET RATES.**

Our Portable Coil Outfit Should be in the Hands
of Every Physician. Complete \$175.00.

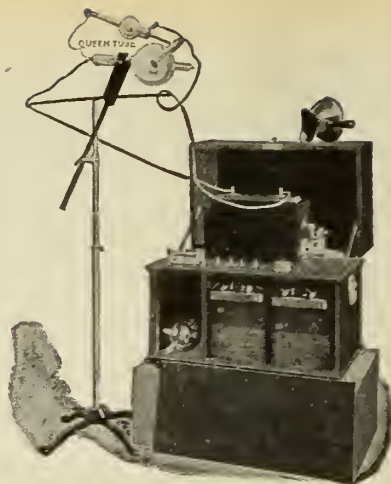
Inquiries Cheerfully Received.

Write for Catalogue H

AMERICAN X-RAY CO.,

Please Mention this Journal.

34-37 Randolph St., CHICAGO.

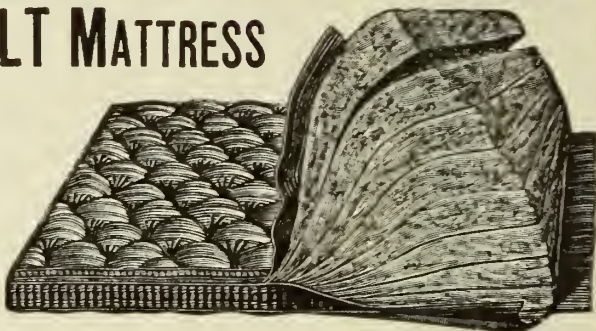


ELASTIC COTTON FELT MATTRESS

MANUFACTURED BY

The Springfield Mattress Co.

Indorsed by leading Physicians as
the most practical and satisfactory
Mattress for hospital use. Ask your
furniture dealer for them or write
direct to us.



THE SPRINGFIELD MATTRESS CO., SPRINGFIELD, ILL.

THE CINCINNATI SANITARIUM

A Private Hospital for Mental and Nervous Disorders, Opium Habit, Inebriety, Etc.

TWENTY-NINE
years' successful
operation. Thor-
oughly rebuilt, re-
modeled, enlarged
and refurnished.
Proprietary inter-
ests strictly non-
professional. One
hundred and fifty
patients admitted
annually. De-
tached apartments
for nervous inval-
ids, opium habit,
inebriety, etc.
Location retired
and salubrious.
Grounds exten-
sive. Surround-
ings delightful.
Appliances com-
plete. Charges
reasonable. Elec-
tric cars from
Fountain Square,
Cincinnati, to San-
itarium entrance.
Long Distance
Telephone 735W.



**FOR
PARTICULARS
ADDRESS**

ORPHEUS EVERTS, M. D., Supt., College Hill Station, Cincinnati, Ohio.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. {
No. 2.

Springfield, Ill., July, 1903.

{ SUBSCRIPTION
\$3.00 A YEAR.

A SOCIOLOGICAL VIEW OF CRIMINAL ABORTION.*

BY W. J. FERNALD, M. D., FRANKFORT, IND.
Member of Champaign County (Ill.) Medical Society.

If the query has arisen in the mind of any on reading the title of this paper, "What have we to do with the question of Sociology?" the answer may be found a greater or less number of times, I have no doubt, in the professional experience of every one who listens. For but few men have practiced medicine for any great length of time, I doubt not, without having had rankle in their bosoms the unspeakable insult, personal to himself as well as to his profession, conveyed in every respect for the commission of a criminal abortion.

And in the fact that these requests are invariably preferred with the most unblushing effrontery, as though crime, both legal and moral, was a purchasable commodity easily procurable on a cash basis from the nearest physician, we realize the immensity of the stain put upon the noblest profession but one by a few conscienceless lepers that infest its ranks. In this phase of the subject each physician has a personal interest. For the stigma placed by the few on the profession casts its shadow over the individual physician; and through that the public has come to believe that however upright a physician's life may otherwise be, this one crime may be proposed to him and meet no adequate resentment. And it must be acknowledged that though this blight has fallen on the profession through the baseness of the few, it remains there largely through the indifference of the many who, though refusing to do the deed, couch their refusal in such polite terms to save perchance a rich patient, that any insult that may be felt is hidden completely from view. However important to the profession is the relation of this tendency to get rid of the products of concep-

tion, it has a far deeper significance to the student of social conditions at large. For he who looks at this question from the highest standpoint can see as its only result not only individual destruction, but social destruction as well, whose deadliness is in direct ratio to its prevalence.

Briefly stated, a society is a collection of individuals the size of which is finally determined by its environment, organized for the ultimate purpose of securing to the individual the highest measure of personal liberty compatible with the rights of his fellow man; and also that the greatest measure of good may be secured by him with the minimum of effort. The largest type of this organization is an integral nation; but the organization and purpose of it are repeated wherever and whenever a limited number of men within the larger organization, band together in a common purpose to secure a predetermined end. The activities superinduced by personal and social needs leads to the obscuration of the ultimate principle upon which society is organized or becomes possible; and we come to regard objects desirable as of higher importance than the fundamental sociological order without which these ends were impossible. And this is true because the fundamentals of life, whether inorganic, organic, or superorganic, are largely automatic; they need no attention. But, for the extraneous things effort is required; and these with the efforts to obtain them, fill the mind to the exclusion of those functions which go on automatically.

Therefore, though the sociological needs and the methods of their attainment, as by government, law, education, etc., fill the mind to the exclusion of things primarily more important though automatic in a sense, we must not forget that these automatic fundamental principles exist.

The unit upon which society and the state is based is the family. All sociological and political structures designed or evolved for

* Read at 53d Annual Meeting, Chicago, April, 29, 1903.

the advantage of the individual have this unit for their base. And the evolution of these structures from savagery to civilization has been coincident with the evolution of the family.

As the evolution of the family has proceeded through the stages of promiscuity of intercourse, polyandry, polygamy to monogamy, so the evolution of societies has proceeded through all stages from small and isolated tribes of savages loosely bound together, to the present wide spread peoples whose governments are animated by high and noble purposes. If it be argued that the same claim might be substantiated with regard to religion it suffices to remember that until recently, at least, the marriage rite was strictly religious in character. The family was born of the church. Whether it should not have remained so is a debatable question. For there is good reason to believe that many of the evils that now afflict society follow from making marriage a civil contract instead of a religious vow.

As the foundation of the state is found in the family, so the foundation of the family exists in the biological structure of the race. For while we commonly consider a man or a woman as a biological unit, a moment's consideration will show it to be true only in a limited sense. Neither is perfect. Each finds a reciprocal correlation in the other; and only when the two are joined together does every relation find its correlative. And the link that draws the two imperfect units together in the family relation; that principle upon which in the ultimate analysis the home is founded, is that transcendent passion which has been incapable of suppression in the individual by any power save the highest moral ideal, reinforced by the sacred precepts of religion, from the beginning of time 'till now; the passion we know as sexual intercourse. And that all these reinforcements to virtue may fail in the hour of great temptation we too often see in the carnal fall of those who have as a matter of religion taken the vows of celibacy.

If the naked statement that the home is founded ultimately on an animal passion seems at first thought offensive, we have only to examine it a little to find a refuge from

the offense in the truth of it. Then after recognizing the truth we may cover it over with conventional flowers, not forgetting the truth which conventionality hides. The truth of the above position is at once established when we remember that society can have no more important duty than to perpetuate itself by reproducing at least enough members to replace those lost by death or otherwise. If this be not done all other sociological objects disappear with the disappearance of the society. If this were not enough to establish the truth above set forth, but socially ignored we find additional proof in our every day language. Every one knows that kindness, honesty and truthfulness are virtues highly to be praised in a woman. But when the virtue of any woman is denied no thought is given to failure of these. Every listener instinctively knows what is meant.

Men and women may prostitute their intellectual powers to base ends. But it requires an adjective qualification to indicate this kind of prostitution. For prostitution unqualified had an unequivocal meaning, and relates to only one thing.

Granting then that this which the French call the "One Grand Passion" forms the ultimate base of all social structures, does that fact need an apologist? I think not. That passion which, through marriage, has been sanctified through time by the stainless innocence of babyhood; that passion, the flower of which poet, artist and romancist have tried in vain through all these years to tell the story of; which has filled the earth with lullabys: transformed bare walls into homes and made home a heaven; peopled it with baby forms more beautiful than seraphs; whose innocent prattle over childhood joys is music sweeter far than the tenderest chords that shall yet be struck by angel hands from golden strings around the great white throne; that passion that has given to language its sweetest word—mother: has transfigured each woman crowned with maternal joy into a real Madonna, kindling in her face a light as radiantly beautiful as the halo that shone round the head of Mary as she bore the Christ child on her enraptured bosom: that passion needs no apology from us who mention it, nor from you who listen.

This animal passion lying then as it does at the foundation of society, being the ordinance by which society perpetuates itself, is of supreme importance and is, as is everything else, the outgrowth of the constitution of things. And whether we rest our theory of things upon revelation, the express declaration of which is that man was created out of dust of the ground; or whether we believe with modern philosophers that organic life is evolved from inorganic life, while super-organic phenomena are products of the same law; and that every existant thing is but incarnation in the dust of earth of an "Eternal and Unknowable Power," we are compelled to admit the fact that whatever it may be on its obverse side, on the one known side each phenomenon is physical and under the dominion of physical law. So then from either point of view this passion through which the sexes are united, while it is on the one side ethical and moral, is on the other side physical and governed by the law of the physical.

What then do we find to be the one thing characterizing these physical laws? No other thing can be said of them more necessary to be learned than this: that they are immutable, and that no one can violate even the least of them without paying the penalty. And the penalty is physical death either partial or complete. For the most startling fact in all the world to him who thinks is this: that Nature by the inviolable constitution of things is just even to death; that the judgment is not postponed but is written here and now in the constitution of him who violates the law.

Emerson has expressed the truth I would emphasize in words more splendid than any I can frame when he says: "The ingenuity of man has always been dedicated to the solution of one problem, how to detach the sensual sweet, the sensual strong, the sensual bright, from the moral sweet, the moral deep, the moral fair; that is, again, to contrive to cut clean off this upper surface so thin as to leave it bottomless; to get one end without the other end. The soul says eat. The body would feast. The soul says: The man and woman shall be one flesh and one soul. The body would join the flesh only. * * * *

This dividing and detaching is steadily counteracted. Up to this day it must be owned no projector has had the smallest success. *

We can no more halve things and get the sensual good by itself than we can get an inside that shall have no outside.* * * Life invests itself with inevitable conditions which the unwise seek to dodge, which one and another brags that he does not know; that they do not touch him; but the brag is on his lips, the conditions are in his soul. If he escapes them in one part, they attack him in another more vital part. If he has escaped them in form and in appearance, it is because he has resisted his life, and the retribution is so much death.

That this is a practical as well as a theoretical truth all history shows. We recognize the fact that the law of absorption of nutritious materials is an essential and physiological existence. We know that materials absorbed may be life giving or life saving in one condition of health, though destructive under other conditions. Other absorbable materials produce an exaltation of the powers of life for a time. And many there are who having felt this temporary exaltation and dreamed the dreams that come of it, take stimulants again and again to their eventual destruction. For no man heightens his life by artificial means except he shorten it.

DeQuincy's name is probably imperishable. But his fame rests on the airy frame work of opium dreams, the mainspring of which brought him an early and miserable death.

Poe's Raven might aptly be said to be the fixation in splendid verse of the wild vagaries of an alcoholic delirium.

Byron of the furious soul, burned the moorings of his spirit from the clay that held it with alcoholic fires and died at thirty-six.

Burns who enshrined the beauty of Scottish life and Scottish scenes in matchless music, and crowned with the splendor of his imagination the Daisy and the Mouse of his native hills, paid the penalty of a life that was at once swift, high and deep in an early death.

If then the violation of these laws which

are physical on the one side, and ethical and moral on the other, produce a destruction as inevitable as it is fatal when that violation and its effects are confined to the individual; if there is no place in all the earth so secret that in it the individual may violate law and escape the penalty; if indeed the irrevocable judgment of death, partial or complete is written by the individual in his own being by that act of violation; so also two individuals may not league together to violate a law of their being and escape the penalty. If that law concerns the individuals alone the penalty of its violation is registered in the individual alone save as it evolves succeeding generations through heredity. But if the violation concerns a law not fundamental to the individual alone but fundamental to the family and society at large as well, we may expect to find the judgment of destruction registered in the individual, the family and society at large.

That the crime of abortion is an attempt startlingly frequent, at evading the legitimate physiological and sociological result of sexual intercourse will not be denied. And so frequent are these attempts that their commonness leads superficial observers to consider abortion as a distinct sociological disease. But a careful consideration of the matter will convince the most thoughtless observer that instead of being a distinct sociological disease it is only a symptom made frequently known by reason of the fact that it bears such violent physical disturbances directly in its wake that it cannot be concealed. And that the real social disorder, of which this is only one of the symptoms, is the determination of multitudes of men and women to have the physical pleasure of married life without fulfilling its physical, sociological and moral responsibilities. The real trouble is that either small families are desired, or that none at all are wanted. While the burning desire of the majority of newly married couples seems to be not to have a family grow around them in the early stages of married life. Out of this desire springs not alone abortion after conception has occurred, with its manifold physical ills, but multitudinous methods of preventing conception are adopted, each of which is fol-

lowed by its peculiar type of destruction; and followed none the less certainly because judgment of destruction may be apparently postponed; or because through concealment of the cause the fatal event may be, and often is ascribed to other causes.

The real social disease then, being the desire for small families, dealing as it does not with the individual alone, but through them with the family, society and the state, we may expect to see its diabolical effects in the individual, the family, society and the state.

That we can trace its effects in each of these directions no thoughtful man will attempt to gainsay. And if you will pardon the plainness of speech necessary in discussing this subject I will attempt to follow briefly the symptomatology of this which Bishop Potter, in a recent number of the *North American Review*, calls the "Unnamable Vice which is Sapping the Vitality of American Society."

As to the individual every physician understands perfectly that a healthy person is one possessed of healthy organs regularly discharging their function in a normal and unobstructed manner. And each one knows that an organ persistently obstructed in the discharge of its function undergoes a degenerative change in direct ratio to the degree of obstruction. As the health of the organism depends upon the health of the component organs, the function of none can be lost or diminished without detriment to the whole. The function of the generative organs normally discharged without obstruction results in the deposition of the male element at all times in a position favorable to fecundation; and when certain physiological processes have been completed in the female, the male and female elements meet at a place favorable to conception. Now the continued health of these organs, as of all others, is dependent upon the normal and unobstructed discharge of their function. And no effort to avoid conception by the use of physical obstructions to the union of the two elements can be devised that do not materially interfere with the normal discharge of that function. And I believe that none of these methods may be so carefully employed as to insure absolute success for a great

length of time without producing some degree of impotence in the male, sterility in the female, or both.

That quiescence of this function is not inimical to health is theoretically true. But that health practically depends indirectly on the normal discharge of it is shown by the frequency in the unmarried of both sexes of self abuse, of venereal diseases, and in unmarried women of criminal abortion.

If conception has occurred and abortion be determined upon, physical destruction more swift, but not more sure, follows. Sepsis due to ignorance of the lay operator, and carelessness of the professional abortionist, produce speedy death in many cases and chronic diseases in multitudes of others. Nor can the normal processes set in motion by conception be suddenly and violently arrested without serious physical and mental disturbance.

And the frequency with which married women who have aborted, or have failed of conception through efforts to prevent it, fall into the hands of the gynaecologist has built the specialty of gynaecology to its present colossal proportions.

If the physical dangers to the individual are many and sure, the dangers to the home life are fully as numerous and equally certain. For there is no more significant myth than that of the blind god with the bow and arrows; a shaft from whose quiver brings men and women to the hymeneal altar. His name, Cupid, means desire; and the form he bears, that of a winged babe, typifies the object of the desire of one or both of the vast majority of those who are married. And if after marriage, the knowledge of the dangers attending abortion leads to the abandonment of intercourse entirely as a means of limiting the size of the family, the plan to be successful and not disrupt the family would have to be completely acquiesced in by both husband and wife, a very rare possibility to say the least. For the demand of every organ is the discharge of its function. And if either did not agree fully with the plan, that one feeling the injustice of it, would be tempted to seek satisfaction where satisfaction might be obtained as a commercial commodity. Or fearing the penalty

placed upon this, in the shape of venereal ruin, would indulge in the secret vice either alone or together, thus postponing immediate destruction to its remoter form in a mad house. Such cases are known to be not infrequent.

If the attempt to limit the size of the family be confined to the first few years of married life it not infrequently happens that through impotence, sterility, or the formation of the habit of abortion in the woman, a family becomes an impossibility. Then when children are desired and are found to be forever impossible, the salvation of that home to happiness becomes an impossibility. A childless home may be endured by those who desire children when the inability to procreate is believed to be natural. But when one or both know or believe that sexual inability has for its foundation deliberate sexual crimes, an unspeakable repugnance is the result. Then they learn through the vivid medium of personal illustration in their ever present physical decay that intercourse between husband and wife unaccompanied by the willingness to bear the legitimate consequences of it is but little removed if any from concubinage concealed under the form of marriage, a socially condoned form of prostitution. Jealousy arises and with just cause in many cases. And that home life which in its purity is the earthly type of heaven becomes a foretaste of perdition.

That the above brief outline of evils is not imaginary I know. For in my own brief professional life I have seen, and could detail for you, had I time, examples of the unspeakable evils brought about exactly along the lines above laid down. Each one who told the story of his ruin bitterly repented his folly when for the restoration for his lost happiness the bitterest repentance possible to an anguished soul must be forever in vain.

If it is true that the product of this social leprosy is inevitable destruction in the individual and in the home life is it true in that wider social life comprehended in the State? A moment's consideration will show that it cannot be otherwise. For moral degeneration of all kinds follows directly in its wake and is in direct proportion to the prev-

alence of it. It needs no argument to establish the truth of the statement that any man or woman who can be prevailed upon to commit the highest of crimes can also be prevailed upon to commit any minor crime. Accepting as the moral definition of murder that it is the putting an end to human life, abortion is murder in its moral sense. For dead materials cannot remain in the uterus and develop. And that which is not dead has life. Whoever puts an end to this life or permits it to be done by passive participation, is a murderer; and adds to this blackest crime in the calendar a deeper stain still, that of the rankest cowardice in the helplessness of the victim. The man or woman who can do this can be induced to any other moral or legal infraction if the price be made sufficiently high and freedom from detection be reasonably certain.

If a concrete illustration of the social destruction brought about by the causes above set forth is needed, we have it in the Republic of France. There these causes and efforts are epitomized. It is known that the population of France is stationary. Only as many are born as die. And though this physical passion is unrestrained in France its legitimate physiological result is escaped through the ingenuity of that people in avoiding conception and in aborting it after its occurrence. As a result a Nation whose language has no word for home is most destitute of homes. The powers of the State strive to promote marriage and offer rewards for large families in vain. Taxation of bachelors is equally fruitless. In a land where the sign of a woman's shame in the shape of a babe can be successfully avoided the shame itself is finally lost. Prostitution becomes a fine art. To be a mistress is a privilege, while a man by the regulation of high society loses cast only when he has two mistresses instead of one. That there are many happy homes and virtuous women in France no one denies. But that gross sexual immorality exists there also to the degeneration of society cannot be denied. For contrast, turn to Germany with its progressive people, where large families and happy homes are the rule. Granting that the above is all true, and I have not consciously over stated

the facts, what are we to do about it? you may ask. That something should be done, I think none will deny. For as our President recently stated, the efforts at limiting the number of children born to native Americans is so successful that were it not for the number of inigrants coming to our shores, and who have large families after coming here, our population would be almost at a standstill also. The lessened sanctity of the marriage vow, and the multiplication of divorce suits based upon charges of infidelity are indications of the spread of this social evil too startlingly vivid to be ignored. That the evil tendency of the times is also shown in the relaxation of the social ban placed upon those whose unchastity is known, I believe history shows. For in Puritan days, as Hawthorne tells us, the mark of the Scarlet Letter was placed upon the fallen woman when she was not condemned to death. And though as Hester Prynne stood on the pillory, wearing the emblem on her breast, she bore on her bosom her illegitimate babe, a mother love that failed not in this supreme trial procured for her no pity among all who watched her. But today it is different. Society watches with unconcern the multiplication of lying in hospitals where unmarried women may be delivered and they returned to good society where painful questions are avoided. Society listens with quiet souls to the tale of the early death by disease, violence or starvation of these abandoned babes, and is not disturbed in its complacent serenity by the doom of moral and intellectual death which too often crowns their physical lives if that happens to be spared them.

Whether mercy or justice should be the social portion of women who have loved not wisely, but too well, may be a question. But there can be no question I think that if mercy is to be shown to any it should be to those who redeem their lapse by maternal faithfulness to the outcome of it. To have been seduced may be no crime. But the woman who having been seduced, purchases salvation from the sign of her shame by the abandonment of her flesh and blood to an unknown fate at the careless hands of strangers, has crucified the tenderest in-

stinets of her womanhood and is unspeakably base.

Though the outgrowths of this social disease are ethical and moral as well as physical, we as physicians have a duty to perform in regard to it which we may not escape through the desire to avoid the charge of preaching. For the underlying cause of all these evils being physical, many of its results are physical as will be readily acknowledged. With the physical effects we are regularly called upon to deal in venereal and gynecological diseases.

Every profession has two functions to perform and it has not fulfilled its mission to society until it has discharged both functions. Its immediate duty is the alleviation of suffering due to violated laws whether those laws be physical or otherwise. Each profession differs from every other in the kind of work it is called upon to do in this respect. But in their remoter and higher function all the professions are one, bearing the sign of their unity in the title given them. For the most learned men of all professions are called doctors, and the title doctor means a teacher.

It is our immediate duty then to relieve the suffering caused by violation of the laws of life. And that the profession has been faithful to this trust countless heroic lives that have been crowned with the martyr's death testify. But he who not only relieves suffering but teaches those who confide in him how to avoid its return in the future has played the higher part.

No one can tell the truths here spoken of with more effect than we. The minister dealing with the penalty postponed beyond the grave, appeals to no one save those who believe in immortality. While the terrors of the problematical penalty postponed to a future world, loses, in the presence of great temptation, much of its force. But to us it is given to tell the practical story of a penalty which is not postponed, but which is reaped here and now in irrevocable destruction. We can illustrate the truth that the order of things is framed along the lines of justice and truth; that there is a legitimate price set on the thing we would have; and that he who would cheat the World Spirit by

taking the joy without paying the legitimate price, must pay a higher price coined either out of his body or his soul.

But we can tell this needed story only after realizing the truth of its ourselves. We must understand with the Greek that "The dice of the gods are always loaded;" that he who would rob the soul of the universe, crowned by humanity as the God of heaven, is scourged here and now by that infinite Power out of which man sprang, and before which no man can stand.

Realizing this truth of supreme importance we need not fear that the world will not listen, and that our profession, when it has become the teacher of the highest truth given to it alone for proclamation, will take higher rank in the economy of the universe than ever before. For a weary and struggling world, blindly striving in ignorance to escape the last of a fate whose laws it does not understand, has throughout the ages watched with eager soul and anxious ear for the word of him who with clear note sounded the truth that saves. And when that note has been sounded clear and strong above the tumult, no obstruction avails to stop the progress of those who have heard to high-life and purer joy.

Little as we realize the truth the crown of imperishable fame has been forever placed on the brow of him who taught and not on him who simply does. A truth once taught generates armies whose mission is the organization of that truth in the economy of things, and against which no contesting force can finally stand. Every man whose name is enshrined in the heart of humanity with a splendor that never fades has taught some truth. Moses, Aristotle, Socrates, Plato and Spenser are not remembered for the things they did, but for the truths they taught. Shakespeare, Milton and Dante are immortal because through their mighty souls there were manifested truths that mould the history of a world.

That which is true of all other arts, sciences and professions is true of ours. We need to realize it more.

Countless physicians and surgeons labor at the bedside to relieve suffering. And that is good, but not the highest good. Prophecy

laxis is better than medicine. We, if we do only that, and fail to read the truth below our deed, which needs to be told, and which can only be told by him who sees it, have failed of our highest duty. Pasteur, Lister, Koch and Behring did their clinical work well we may believe, but we know them not for that. Their imperishable worth rests on the fact that out of that work they formulated a truth which when received, did more to relieve suffering and banish premature death than the combined efforts of all who had gone before, but who saw nothing in the sick room other than the sufferer and his symptoms. Through the truth they taught they are immortal indeed. For through the hands and brain of all coming physicians they will work again after their bodies have molded into dust for untold years.

By the truth of this we must not forget we have duties as teachers of men. No man is an accident either in time or place. And in so far as he does his duty faithfully, earnestly looking at the significance of phenomena out of which that duty springs, there comes to him some truth to be told, small though it may seem, for the telling of which the world will be better; and from utterance of which he may not refrain without some degree of intellectual suicide.

Thousands of years have silently slipped into the past eternity since the first man and woman were given for a home the garden of Eden. With that home, and forever inseparable from it, a law was given, through obedience to which supreme happiness was to be their portion surrounded by all that omnipotent Goodness had made beautiful. But they disobeyed, and because they disobeyed, they were lost to that happiness with which they had been invested. For it is written that "In that hour the Lord God drove out the man and He placed at the east of the Garden of Eden Cherubims and a flaming sword, which turned every way to keep the way of the tree of Life."

From that day to this the lesson that disobedience to the law of life in the home brings immediate pain; and that obedience to that law is the price we must pay for its fullest joy has been reillustrated over and over again in broken hearts and falling tears.

Every true marriage is sanctioned of, and watched over by the soul of the universe. Every true home is a garden of Eden. But now, as of old, the flowers of love that bloom there are garlands of beauty, resplendent with the light of the star of hope that shines from the heaven above them, to gild with glory the chain of eternal law that holds, and which may not be broken. Through obedience that beauty never fades and that light never fails. But the crown of disobedience is immediate ruin. And they who fall are driven out, to watch with staggered soul the Cherubims at the east of the garden, now forever lost, and the flaming sword that still turns every way to keep the way of the tree of life.

Discussion.

H. C. Jones, Decatur: I have an apology to offer if I have delayed you in getting my paper, which is down stairs, from the fact that I could not afford to lose any part of Dr. Fernald's paper, and I am sure I voice the sentiments of those who are present in regretting very much that we could not have had a larger audience.

Dr. Johnson, Champaign: Like Dr. Jones, I regret that Dr. Fernald could not have had an audience of one hundred instead of a dozen. Some of us who know Dr. Fernald well are not surprised at the high character of the paper. I don't know that it needs discussion, as the paper is perfect in itself, it seems to me, as near as a paper can be.

W. C. Bowers, Decatur: Mr. Chairman, while there cannot be much said of the paper, those who have heard it cannot but say that the subject has been absolutely covered, and yet we are all impressed by the fact that pressure is brought to bear on every physician from the day he opens his office till the end of his life, to have him commit abortion. I suppose there is no physician who is not approached very frequently with this object in view. Every advantage is taken of the physician, as hinted at in the paper, to induce him to commit this crime. There is only one thing to do, and that is to make up his mind that he will never make a start in this direction, and then he will have greater strength to refuse every one who comes, because they do come, and they come from sources often where you least expect it. If he loses sight of the criminality of the affair, and the moral responsibility he takes, he is sometimes inclined to aid people who seem in very distressing circumstances, but if he ever does he has started down the hill.

One of the most able men in my city of Decatur is a man absolutely in disgrace with the profession, and I lay his downfall, and the fact that he has reached the bottom, entirely to the fact that he early became an abortionist. Now he scarcely is less than a professional abortionist under cover.

It seems to me that the best thing to do with

the paper is to place it in the hands of every professional man in this state, whether he is in good standing or doubtful standing, because many men who are lax in this matter might be brought to a realization of the evil they are committing, and thus this paper would probably be the means of elevating his social and professional standing. I regard the paper as the best one I have heard on the subject.

Dr. Ferguson: I think Dr. Fernald struck a key-note when he said that it was difficult for physicians to talk against this subject of prevention of conception, and miscarriage, without being accused of preaching. I wonder if we do not preach a good deal to the poor women, and do not omit a great many sermons to the young men and the older men. It seems to me that it is the manifest duty of the physician in his intimate relations with the heads of families to explain to them early in their married lives, that they in turn may explain these things to the boys and girls, and make them familiar with this subject. While we have our share of physicians, I do not believe we have many abortionists. I don't know a great many. I know to a certainty that we have a great many men who say when they are married that they don't want to raise a family just yet—they are not quite ready; they will want to, maybe, sometime, but not just now, and I think it is a common custom in the profession to tell them how to avoid conception; and, speaking of the fine art in France, I think it is a fine art in this country. I know a little coterie of women who have a little set of instruments that they pass around from neighbor to neighbor. They are somewhat adept in matters of sterilization, and all that sort of thing, and it is remarkable how nicely they get along. I have called on one or two of them, and they have told me about these things. I believe we could do more than we do by telling the man plainly that often times he is little less than a beast. I think that sort of talk must certainly have a little influence.

Dr. Fernald, in closing the discussion, said: Mr. Chairman and gentlemen: I am sure I thank you all very much for the kind words you have given utterance to with reference to the paper, and only wish to say in conclusion that I heartily agree with the gentleman, the one who has just spoken, that there are not many members of the medical profession who are abortionists. I do not believe that. It is stated in the paper that the odium of this thing is thrown upon the profession by the guilt of the very few. Once again, I thank you for your kind remarks about the paper.

Carl E. Black, the new head of the State Medical Society was born at Winchester, Ill., 1862, graduated at Illinois College, Jacksonville, and at Northwestern Medical School, Chicago. He afterwards studied at the University of Vienna. Dr. Black is said to have an extensive practice in the State. He is chief surgeon for several hospitals and for a number of railroads, and is considered an expert in his department.—The Medical Standard.

THE PRACTICAL AND SCIENTIFIC VALUE OF BACTERIOLOGIC EXAMINATIONS OF THE BLOOD DURING LIFE.*

BY LUDVIG HEKTOEN, M. D., CHICAGO.

From the Memorial Institute for Infectious Diseases, Chicago.

The bacteriologic examination of the blood during the life of patients with various diseases has given results of much scientific importance and in certain cases the method has been found of immediate practical value.

TECHNIC.

The best method to secure blood for bacteriologic cultures is venous puncture under the most scrupulous asepsis. Naturally glass syringes (Luer patent) are preferable to metallic because more easily sterilized and because transparent. The skin must be scrubbed carefully and prepared as customary for surgical operations. By some it is regarded as sufficiently cleansing to wash the area about the puncture with alcohol. In practically all cases one of the veins at the elbow, usually the median, is selected for the puncture, and a moderate constriction of the arm will distend them so that in most persons they are clearly visible and palpable. In fleshy persons it may be found impossible sometimes to make apparent in this way the location of veins, in which case it may be necessary to make the puncture more or less blindly. The discomfort connected with this little operation is insignificant and when properly done with sterile needle it is without danger.

Various procedures have been used to secure blood for bacteriologic purposes, e. g. sterile cups (Petruschky), exposure of vein by incision, puncture of the spleen. But real progress followed only the use of venous puncture as described and the simplicity and certainty of this method recommends it above all others. Ordinary, cutaneous puncture is wholly worthless for bacteriologic purposes because of the small amount of blood obtainable and especially on account of the frequency of contamination.¹

Immediately upon withdrawal of the

*Read at 53d Annual Meeting, Chicago, May 30, 1903

needle after filling the syringe, suitable media should be inoculated with the blood before clotting takes place. In most cases it will probably be deemed most advantageous to inoculate small quantities of blood e. g. 1 cc, into large quantities of some liquid medium like bouillon or milk, e. g. 100 cc. The main reason for this dilution is the necessity to overcome so far as possible the natural bacteriological properties of blood, at least for some bacteria, properties that seem to increase as clotting takes place and leucocytes disintegrate.² In order to increase the chances for positive results the number of flasks inoculated may be multiplied to almost any practicable number.

When we wish to obtain some idea of the number of bacteria in the blood it will be necessary to employ the plate method of making the cultures. This method has been used with excellent results by Schottmuller in the study of typhoid fever. He has found that the mixing of 2 to 3 cc of blood with 6 cc of agar gives sufficient dilutia. In the plates thus made the number of colonies developing may be counted and the bacterial content of the blood estimated from time to time.

Anaerobic methods may be used when it is deemed advisable, but so far no extensive systematic studies of the blood have been made by such methods.

During this process of inoculating flasks, or tubes of solid media, great care must be taken to prevent aerial contamination. The mouth of the uncorked flask should be held in such a way that bacteria cannot fall into the medium. It is to be remembered that one single coccus, for instance, is sufficient to cause contamination of a flask. The most dangerous sources of contamination are the skin of the patient and the air, and in spite of the most careful precautions occasional contaminations will occur from time to time. Perhaps organisms sometimes are picked up from the deeper layers of the skin as the needle passes through. In most instances the contaminating organisms will be found to be

vulgar staphylococci, and in my opinion it will be a safe rule to attach no significance to the development of growths of staphylococci other than staphylococcus p. aureus in cultures from the blood except under very special conditions. From time to time the finding of ordinary staphylococci in blood cultures has led to the misleading announcement that the cause of certain diseases of unknown etiology has been discovered.

The inoculated flasks are then placed in the incubator for 24 to 48 hours when they are examined for turbidity and other evidences of bacterial growth. When the bouillon remains sterile the blood corpuscles fall to the bottom intact, the supernatant fluid becoming clear or nearly so. In the case of streptococci an early evidence of growth often is diffusion of hemoglobin, i. e. laking of the blood owing to the development of a special hemolytic substance produced by streptococci. This substance has been studied especially by Besredka³ and is called by him streptococysin. Ordinary bouillon is sufficiently isotonic with human red corpuscles so that they may remain intact in it for days in the absence of bacteria. In the case litmus milk has been used as the medium the growth of pneumococci, for example, may be signalized by redness and coagulation. Typhoid bacilli usually cause a diffuse turbidity of bouillon in 24 to 48 hours. In order to secure easily sufficient material for microscopic examination and for subcultures from flasks of blood cultures I have found the use of long sterile pipettes very convenient. During these manipulations there is always danger of accidental contaminations unless great care is used.

From what has been said concerning the technic of the bacteriologic examination of the blood during life it is evident that its successful practical application requires at least ordinary bacteriologic training and fairly complete laboratory facilities. There is nothing about the method, however, that necessitates any extraordinary skill; the most important part is conscientious regard for fundamental bacteriologic principles so as to escape contamination and erroneous conclusions.

(1) Older literature on the subject of bacteriologic examination of the blood is reviewed by Kuhnau, "Resultate und Leistungsfähigkeit der bakteriologischen Blutuntersuchung im Dienste der klinischen Diagnostik," Zeitschr. f. Hyg. u. Infektionskr., 1897, XXV, 492-543.

(2) Wright and Windsor, Jour. of Hyg., 1902.

(3) Ann. de l'Institut Pasteur, 1902.

VALUE OF BLOOD CULTURES IN SEPTICEMIA.

Passing now to a brief consideration of the various diseases in the study of which bacteriologic examination of the blood has been found to be of scientific and practical value, I shall speak first of the so-called septic conditions which probably include a number of distinct forms of bacteriemia with or without recognizable metastatic localizations as well as local suppurative processes with toxemia. In this motley group systematic bacteriologic examinations during life offer one of the best means for the establishment of a definite diagnosis upon an etiologic basis. The clinical picture and the evolution of these diseases are not sufficiently characteristic for differential diagnosis. This becomes an essential step for the rational use of specific therapy, e. g. anti-streptococcus serum.

As pointed out by Marmorck⁴, the real value of scrums of that kind cannot be established unless the diagnosis of the cases in which they are used is controlled carefully by bacteriologic examinations of the blood and other substances. In connection with these matters the details of the following case may prove interesting.

Mrs. C., 26 years old, under Dr. Herrick's care at the Presbyterian Hospital, was confined the last time January 29, 1903. This was the 5th confinement and like all the others it was instrumental. Three days later there appeared fever and other symptoms of general infection or toxæmia. When admitted on February 8th, the uterus reached halfway to the umbilicus. There was a pronounced footdrop. Cultures: the 9th gave streptococci; on the 11th remained sterile; on the 14th streptococci were present, also on the 16th. On the 20th the blood count showed 2,835,000 red corpuscles, 12,000 leucocytes, (small monon. 7.5%, large 5%, polymorphon. 87%, eosinoph. 5%) 55% hemoglobin. Death on the 24th after continued high fever and muttering delirium. On the 13th she received 10cc anti-streptococcus serum and normal salt solution 500cc; on the 13th 10cc antistreptococcus serum; on the 15th normal salt solution,

2,000cc; on the 19th intravenous injection of saline diuretic.

Anatomical diagnosis (Dr. Bassoe.): Necrotic and ulcerative endometritis; suppurative arthritis and diastasis of symphysis pubis, acute cystitis; acute splenic swelling; bronchopneumonia and pulmonary edema; laceration of uterine cervix; cyst of right ovary; abscess of left heel; infarct of left kidney.

Bacteriologic examinations Streptococci in the heart's blood, in the pus in the symphysis pubis, and in the spleen.

The clinical peculiarities and variability of the various forms of bacteriemia-streptococcemia, staphylococcemia, pneumococcemia, gonococcemia, etc., are in reality but poorly understood⁵. The results of systematic examinations during life will complement the observations made upon material secured after death which naturally give us information principally of what takes place at the end of life. No doubt the conditions during life often are different from those indicated by post-mortem findings, which may be obscured by agonal invasions and by the unrestrained multiplication of bacteria in the blood and organs after death. Systematic examinations by Lenhartz⁶, Bertelsmann⁷ and others show that in the majority of the so-called septicemias it concerns a streptococcemia. Canon⁸ endeavors to establish the indications for amputation in progressive phlegmons of the extremities by the number of colonies in the plate cultures of the blood made at frequent intervals, an increasing number establishing the necessity for amputation. While the number and character of the observations hardly warrant definite opinions upon such points as this, it has been shown clearly by blood examinations that recoveries frequently take place in various forms of bacteremia.

Indeed, one of the conclusions of the very first systematic examination of the blood in

(5) See Kretz, Verh. deut. path. Gesellschaft, 1901, IV, 186-187, and Zeitschr. f. Heilkunde, 1902, XXII.

(6) Von Leydens Festschrift, 1902, p. 325.

(7) Verh. d. Gesellsch. f. Chirurgie, 1902, XXXI, 291-304.

(8) Mittheilungen a. Grenzgebiete etc., 1902, X, 411.

(4) Ann. de l'Institut Pasteur, 1896, X, 591 and 620.

septic diseases, namely by Petruschky⁹ in 1894, was that in cases of acute infections with pyogenic cocci the infecting organisms may be present in the blood to some extent even in cases that do not terminate fatally so that the finding of pyogenic cocci in the blood is not of itself sufficient reason for a hopeless prognosis. More recently Beitelmann in a much larger series of cases of bacteremia saw 21 recoveries in 47 cases of which 28 were cases of streptococcemia with 15 recoveries.

In the Memorial Institute for Infectious Diseases bacteriologic examinations of the blood in scarlet fever has revealed streptococci in a number of cases that recovered¹⁰. Many of these instances of streptococcemia in scarlet fever presented mild clinical symptoms but recovery has taken place also after prolonged and severe illness. Observations of this kind show the necessity for great caution in interpreting the results, sometimes apparently marvellous, of antistreptococcus serum and other more or less rational forms of treatment of blood-poisoning. Certainly it would be erroneous to regard every severe case of "blood-poisoning" as of necessity doomed to death or in the language of over-enthusiastic reporters of novel forms of treatment as "otherwise surely fatal." The relative dangers of the different forms of bacteremia may be determined more definitely than now known by the continued bacteriologic studies of the blood in these diseases.

PNEUMONIA AND PNEUMOCOCCEMIA.

At one time the impression prevailed that in lobar pneumonia pneumococci occur in the blood especially in fatal cases and that for this reason the practical value of blood cultures in pneumonia would be more marked from the standpoint of prognosis rather than of diagnosis. But further observations seem to indicate that pneumococci occur in the blood in all or nearly all cases of lobar pneumonia. Proschaska¹¹ concludes that pneumococcemia in pneumonia does not necessarily mean an especially severe infection and this conclusion seems to be borne out

by work that Dr. Rosenow is now carrying out in our laboratory.

The peculiar sensitiveness of this organism makes it difficult to obtain good growths in our ordinary media unless special care is taken, and no doubt the discrepancies in the results of the various investigators are explainable in large degree upon this score. Contrary to the case of the typhoid bacillus, human serum has no bactericidal effect upon pneumococci so far as demonstrable by the usual plate method (Behring). Indeed, Dr. Rosenow finds that the presence of blood in the medium appears to distinctly favor the growth of pneumococci, a fact that probably has not been taken advantage of sufficiently in many of the previous investigations upon pneumococcemia in pneumonia.

The following case is given as an example of rapidly fatal pneumococcemia without any distinct localization so far as could be determined by clinical examination¹².

Mr. H., age 47, in previous good health; for two weeks he had watched over his two children who were very ill with pneumonia; he noticed that his nasal catarrh which was of long standing had grown worse rapidly and within a few days severe frontal headache developed; slight fever came on and gradually increased while the headache became almost unbearable. Dr. Herrick saw him on about the seventh day. There was then slight delirium with tendency to drowsiness; no retraction of neck; pulse 90; lungs normal; no vomiting; retina normal; no paralysis or twitchings; Kernig's sign not present; meningitis suspected secondary to pneumococcus Rhinitis; typhoid fever also considered though there were no rose spots, no splenic enlargement, and no agglutination reaction. On the next day cultures of the blood were made, pneumococci developing in pure culture. The blood showed leucocytosis. At this time the patient was quite clear mentally, but he soon became unconscious and died within 18 hours. No necropsy.

TYPHOID AND PARATYPHOID FEVERS.

Systematic bacteriologic examination of the blood in typhoid fever has resulted in

(9) Zeitschr. f. Hyg. u. Infektionskr., 1894, XVII, p. 59.

(10) Hektoen, Jour. American Med. Asso., 1903.

(11) Deut. Arch. f. klin. Med., 1901, I, XX, 559.

(12) For the clinical history, I am indebted to Dr. Herrick, who saw the case in consultation.

important, even startling additions to our knowledge of this disease.

Diagnostic Value of Blood Cultures in Typhoid and Paratyphoid: In the first place we are learning that typhoid bacilli occur in the blood so early, while the temperature is rising, and so regularly that bacteriologic examination of the blood may be regarded as the best means of diagnosis in the early stages of the fever, the period when definite diagnosis is most difficult yet most desirable. Schottmuller¹³ and others have cultivated 1561-1565.

the bacilli from the blood as early as the first and second days of the fever and long before the appearance of specific agglutinins, and also in the first 24 hours of relapses after distinct intermissions¹⁴. In case 30 of Dr. Ruediger's bacteriologic study of the blood in typhoid fever¹⁵, which was carried out in our laboratory, a positive culture was secured on the third day of the attack (the patient was a physician working in the laboratory) while the first positive agglutination test was obtained 14 days later. In Courmont's¹⁶ series of 37 cases in every one of which he found bacilli in the blood, bacilli were demonstrated in six cases long before the agglutination test was positive.

As further evidence of the diagnostic value of bacteriologic examination of the blood I may mention here also that in three cases supposedly of scarlet fever blood cultures showed the presence of typhoid bacilli at a time when the clinical symptoms did not point clearly to typhoid fever. In one of these cases it probably concerned an association of typhoid fever and scarlet fever; in the other two erythema and angina in the beginning of enteric fever led to the diagnosis of scarlatina.

Hence the clinical examination of doubtful cases is not to be considered complete or exhaustive without cultures from the blood. Bacteriological examination of the blood is indicated especially in epidemics of fever,

more or less like typhoid fever, but concerning the nature of which there may be for longer or shorter time more or less doubt for various reasons. In such instances positive diagnosis is most valuable; it clears the situation and leads to the prompt adoption of aggressive measures for preventing the further spread of the disease. In the recent typhoid epidemic at Ithica more or less doubt and confusion as to the nature of the fever seems to have led to an unfortunate hesitation in seeking and destroying the source of the infection. The American community is often, much too often, disastrously slow in submitting its sanitary welfare to expert guidance.

What I have said of the diagnostic value of blood cultures in typhoid fever is also applicable to paratyphoid fever.

Is typhoid fever a bacillemia?. In the second place the results of the recent bacteriologic studies of the blood in typhoid are changing our conceptions of the nature of the disease. In their summary of the literature Kerr and Harris¹⁷ show that bacilli are demonstrable easily in the blood of from 80-90% of unselected cases. The earlier the cultures are made the more certainly are bacilli found. On the other hand, the present indications are that the bacilli began to disappear from the blood shortly before the temperature begins to fall (Schottmuller, Ruediger), but relapses and even ephemeral recrudescences are associated with a reappearance of the bacillemia (Schottmuller). Schottmuller, who has paid special attention to these questions and who bases his deductions upon observations of more than 100 cases, believes that the number of bacteria in the blood, as determined by plate cultures, stands in direct relationship to the height of the fever and general severity of the attack. He consequently ascribes prognostic as well as diagnostic value to the results of blood cultures. While the older views in regard to the nature of typhoid fever generally place the stress upon the localization of the bacilli in the lymphatic structures of the intestines and absorption of toxic substances therefrom, only small numbers of bacilli

(13) Munch. med. Wochenschr., 1902. XLIX.

(14) Polacco and Gemelli (Central bl. f. innere Med., 1902. XXIII. 121.) secured pure cultures of typhoid Bacilli from rose spots, often before agglutination.

(15) Trans. Chicago Pathological Society, 1903, V, 187-198.

(16) Journ. de Phys. et Path. gen. 1903, V, 331-340.

(17) Chicago Medical Recorder, 1902.

passing into the blood, it now looks as if bacillemia or blood infection is a dominant feature in the pathogenesis of the disease¹⁸.

It seems to me that the early occurrence of bacillemia, its persistence during the height of the attack, and its relation to relapse and recrudescence indicate that the bacillemia has far greater significance than merely that of transportation of bacilli between primary and secondary foci of localization. Indeed Schottmuller is inclined to regard the intestinal lesions of typhoid as secondary from haematogenous invasion at the same time as he believes that the bacilli enter the blood by way of the intestinal tract, which we must assume is devoid of protective substances at least at certain periods of life. Thus W. Meyer observed typhoid bacilli in enlarged Peyer's patches and solitary follicles on the second day of the disease but with as yet no swelling of the mesenteric glands. But we also know that typhoid fever may occur without recognisable intestinal lesions, or only very limited such; and certainly the extent of the intestinal lesions is not proportional to the severity of the attack. I remember well the necropsy of a case in which death was due to peritonitis following rupture of a single ulcer in the ileum there being no other intestinal lesions. Then again I may refer to the fact that so far the closely related paratyphoid fever appears to cause no intestinal lesions judging from the only two autopsies so far recorded (Longcope, Sion and Negel). But this question of the exact genesis of the typhoidal intestinal lesions, whether all the result of primary invasion from the lumen of the bowel or in part or wholly of secondary localization from the blood requires further study before we can reach final conclusions.

Perhaps invasion takes place along both these routes. The occasional occurrence of angina in the beginning of typhoid suggests that perhaps the tonsils may also be points of entrance of bacilli into the blood. Certainly the demonstration that bacillemia is

so prominent in enteric fever lends little support to the value of specific intestinal treatment of this disease.

In lymphatic, splenic and other lesions of typhoid the most prominent microscopic features is the large number of phagocytic endothelial cells containing red cells and lymphocytes. Recent experimental work shows that hemolytic substances in general induce the formation of macrophages, and it may be that the *B. typhosus* when in the blood produces substances of this kind in large quantities as the result of the reactions between its receptors and atom complexes from the patient. Probably various toxic substances are set free also as bacilli are destroyed by the bactericidal actions of the blood. Interesting questions of this kind as well as the important problem of the manner in which the normal bactericidal properties are set at naught when typhoid bacillemia is established await solution by means of modern cytotoxic and bacteriolytic methods of investigation.

Paratyphoid: In the third place it has been demonstrated that the general clinical picture of typhoid fever may be produced by bacilli other than the typical typhoid bacillus, namely by the so-called paratyphoid or paracolon bacilli, and that the typhoid fever of the past includes a number of similar, closely related, yet etiologically different diseases¹⁹. In these cases of paratyphoid, as they have been called, the special bacilli seem to occur in the blood just as does the typical bacillus in typical typhoid. As the matter now stands paratyphoid seems to develop under the same general conditions as typhoid fever. Systematic bacteriologic examinations of the blood in epidemics of typhoid fever appear sooner or later to reveal cases of paratyphoid, and the number of instances recognized and studied have multiplied with increasing rapidity since Gwyn's first case in 1898. As yet the number of cases of paratyphoid appears small indeed as compared with typhoid fever proper and it is too early to form any idea as to the real frequency of paratyphoid. In Ruediger's 30 cases of clinical typhoid from the ser-

(18) Wright and Semple (Lancet, 1895, II, 196-199) concluded that typhoid fever was not an "intoxication-process," but the result of blood infection because typhoid bacilli are found so frequently in the urine in this disease.

(19) For a general consideration of typhoid see Meltzer, New York Medical Journal, 1902, 138-142.

vices of Dr. Billings, Dr. Herrick, and Dr. Robison in the Presbyterian Hospital of Chicago, two, possibly three proved to be paratyphoid. It is of great interest to note that recently small epidemics of paratyphoid have been recognized and studied in Germany, and a beginning has been made in the study of its clinical peculiarities. In the epidemic of 38 cases studied by Conradi, Drigalski and Jurgens²⁰, the beginning of the disease was often abrupt and the termination sudden without high or prolonged fever. The clinical symptoms, otherwise like those of typhoid, were on the whole not severe, and all the cases recovered. Schottmuller's cases and Feyfer and Kayser's²¹ 14 cases were also marked by the mildness of the clinical course. Before long the clinical characteristics of paratyphoid no doubt will be established even more definitely. In a fatal case of paratyphoid studied by Longcope²² there were no lesions in the intestines and no splenic or lymphatic endothelial proliferations, showing that the disease in that case differed from typical typhoid. Sion and Negel²³ also describe a fatal case of paratyphoid without typhoidal lesions. These authors also report a small series of paratyphoid fever and trace the source of infection to water. Just now the lesions of paratyphoid are matters of special interest to pathologists.

In her valuable study of the fly as the carrier of typhoid bacilli in some of the Chicago tenement districts, in which typhoid fever last year prevailed to a greater extent than elsewhere in the city, owing principally no doubt to shockingly inadequate methods of disposing of dejecta, and neglect in sanitary inspection, Alice Hamilton²⁴ shows that the fly may convey paratyphoid or paracolon as well as typical typhoid bacilli. This demonstration permits the inference that under favorable conditions paratyphoid may be spread by flies just as well as typhoid fever

and that these infections are amenable to the same hygienic and sanitary measures.

No doubt the absence of agglutinins for typhoid bacilli in certain cases clinically like typhoid fever is explainable in some cases on the score of the disease being paratyphoid. The interagglutinability of typhoid and paratyphoid or paracolon bacilli has not yet been exhaustively studied. While the serum failed to agglutinate typhoid bacilli in Ruediger's cases of paratyphoid, others have found that some agglutination of typhoid bacilli may be caused by paratyphoid serum. It has been pointed out already that in some cases of true typhoid, agglutinins are recognizable only after the attack is well established. Under these circumstances it is clear that much weight cannot be placed upon agglutination in determining the nature of a given case or cases. In the Ithaca epidemic this point seems to have been overlooked. The bearing of this whole matter upon the epidemiology of the typhoid infections is stated so clearly by the special commissioner of the Journal of the American Medical Association that I quote directly from his report²⁵.

"Throughout the epidemic the situation has been singularly befogged by a tendency on the part of certain of the Ithaca physicians to deny the prevalence of 'genuine' typhoid fever, and to ascribe the prevailing illness to 'paracolon infection.' The evidence on which this view is based appears to be that a negative result with the Widal reaction has been obtained in a considerable proportion of the cases that have been tested. There is no instance where any paracolon or paratyphoid organism has been isolated from any case of the disease. Even if it were conclusively proven that half, or even all, of the cases of 'fever' in Ithaca were true 'paracolon' infections, it is difficult to see why that fact should materially influence the general situation. It must still have been admitted that a disease of serious character which can not as yet be clinically differentiated from typhoid fever, and which, so far as is known, does not demand essen-

(20) Zeitschr. f. Hyg. u. Infektionskr., 1903, XLII, 141, 147. See also Hunermann, *Ibid.*, 1902, XL, 522-528.

(21) Munch. med. Wochenschr., 1902, 41-42.

(22) Am. Jour. Med. Sc., 1902, CXXIV, 209-218. See also articles by Enxton and Coleman, Johnston and Hewett in same number.

(23) Centralbl. f. Bkt., 1902, XXXII, 483-488, 581-596, 679-692.

(24) Jour. Americ. Med. Assoc., 1903.

(25) Jour. Am. Med. Assoc., 1903, XL, p. 783.

tially different treatment, prevailed excessively in the town. Whatever the nature of the organism, the probable mode of infection and the sources of the infection remained the same, as did the necessity for taking vigorous measures for preventing its spread. There was not a single particular in which the practical handling of the outbreak could have been affected, even if convincing evidence had been secured that all the cases in Ithaca were paracolon cases. The insistence on a distinction, which, under the circumstances, could possess only an academic value and did not facilitate immediate and aggressive action was not a fortunate policy."

The superior diagnostic and practical value of bacteriologic examination of the blood is emphasized again by this reference to the question of the typically typhoidal or paratyphoidal nature of a given epidemic, and we may conclude this brief consideration with the statement that the method of blood cultures is destined to play a most important part in the settlement of the many practical and scientific problems constantly arising in connection with the typhoidal diseases, which, though so well-trodden a field, still invites continued exploration.

CONCLUSIONS.

1. Bacteriological examination of the blood by modern methods has proven itself to be of scientific and practical value in the so-called septic diseases or septicaemias, in pneumonia, and especially in typhoid and paratyphoid fevers.

2. Etiologic diagnosis, that is the recognition of the exact disease present, demands the application to practical medicine of laboratory methods, and in the future the physician's office will assume more and more the aspects of a well equipped laboratory.

Discussion.

Dr. Gehrmann: Mr. Chairman, I would like to make a few remarks in regard to the operation and the technique of getting some blood. It is, as the doctor has said, very simple, and if one is at all careful with the sterilization as they would be if they understood matters of sterilization in the handling of the culture media there is absolutely no danger about it, if there is no infection in the case. To get a nega-

tive result there is no danger to the patient and you have that much information established. I haven't seen a single case where we got into any difficulty on account of making the blood puncture itself. There is no doubt at all of the great value of this procedure for the treatment of diseases, as outlined, and that it is going to be a very important part of our diagnostic methods. I remember a few years ago, in talking about typhoid fever the bacteriological diagnosis was simply a discussion of certain methods of getting the bacillus of typhoid from the stools, and two or three years later we commenced to introduce the serum diagnosis. A few years later we introduced the attempted culture from the rose spots, and now we have the fourth method of blood culture in typhoid. And so it is in other conditions. We have been able to add one or another method to the original lines of procedure. There is an opportunity in this direction in other diseases that are not wholly understood. Coming back to the question of typhoid, I do not see how the bacteriologist could avoid coming to the conclusion that the typhoid bacillus could not be found in great numbers in the stools. The difficulty, and absolute uncertainty of finding it in the stools drives one to the conclusion that it is not there, and I have felt for a good many years that the presence of the bacillus in the intestines is an evidence of the predilection of the bacillus for the lymphatic structures throughout the body. Along this line the work in syphilis is offering some interesting experiments. I am inclined to think that the men who have made blood cultures in syphilis, especially Pfeffer, have been getting more or less contamination in their cultures. In one case I was especially interested in a case of rat bite disease. We made cultures very frequently. The boy was having an irregular temperature, and typhoid or some other form of bacteriological fever was supposed to be present. Blood cultures were made frequently and they were continuously negative; in fact, the entire condition of the case was so negative that by exclusion and comparison with other conditions a conclusion was reached that in this particular case we had a case of rat bite disease, due to the bite that the boy had received some week or ten days before. So that outside of the positive finding we have also here an extremely valuable method for negative findings, and that is the point I desire to emphasize.

Dr. Hektoen, in closing the discussion, said: I have nothing further to say, gentlemen, except in regard to what Dr. Gehrmann said about the harmlessness of the method. It is quite painless, and I should be perfectly willing to have Dr. Gehrmann and Dr. Weaver draw some blood from the vein of my arm, if anybody wishes to see it done.

Dr. Hektoen then submitted to the operation of having a small quantity of blood drawn from his arm, in order to demonstrate the method used in such cases.

EDUCATIONAL INFLUENCES AND OPPORTUNITIES OF OUR CIVIL COURTS, FROM A MEDICAL STAND-POINT.*

BY O. B. WILL, M. D., PEORIA.

It is the constant complaint of medical men that, as a class, they do not occupy in general estimation and in public councils that position of trust and influence to which their scientific training, culture and general intelligence would seem justly to entitle them.

While this is measurably true, the reason for it seems to be at least equally evident, and consists in the fact that medical men generally have heretofore stood aloof from participation, in any very active sense, in such public deliberations and discussions as are commonly accessible to the moving spirits in matters of general, and governmental concern, and have exhibited an apparent aversion to all else than the technical, through petty differences of ethical concern within the ranks of their own craft. Restraint, from active touch with public men and questions has, therefore unconsciously, favored the impression that their knowledge and training have nothing in common with public needs and public service.

This is the whole secret, and the profession have only their own lassitude and indifference, not to say unworthy reserve or self-conceit, to blame for the public non-appreciation of which they complain.

We have heard it repeatedly stated in our meetings, as a grievous fact, that little hope of betterment need be entertained until the general public is educated to a higher standard of appreciation for scientific effort, and a clearer conception of the influence of such evolution in determining broad individual foresight, character and judgment.

We have listened with growing favor to the altruistic suggestions of timely personal effort in bringing about this millenium of professional joy, and this proper understanding of medical men and affairs, to the end of the solution of many of the grave public questions of human health and relationship. We have given profound regard to the propo-

sition of utilizing the public press as a medium of instruction in the claims of legitimate, as it has so long been used in the interest of illegitimate, medicine, and have been bowed down with grief at the mere declaration of the pessimistic amongst us, that every thing medical was anyhow going to the "demnition bowwows" in spite of our most earnest efforts and protest.

But in spite of, and in connection with all this, it may have occurred to some others as it has to the writer, that perhaps we are not as wise ourselves as we assume to be, and might be able, if we would but make the effort, to acquire as well as impart information along these lines of utilitarianism, by taking advantage of the opportunities constantly presented, and mingle more closely with the methods of those in whom we desire to inculcate habits of recognition of, and benignant obeisance to, professional dues as we happen to see them.

As one of these apparently overlooked or unappreciated fields of professional exploit, the writer has chosen for consideration the medico-legal aspects of the civil courts of the commonwealth.

From a basis of personal experience and observation, he is profoundly convinced that these arenas of popular argument and justice offer one of the best avenues of educational enlightenment and reform open to the influence of the watchful and thoughtful medical man. It not only fills the indications of extensive public need, but offers to the physician himself instruction of no mean consequence and degree, in the very direction in which he needs it most.

As a matter of actual fact, the civil tribunals of the land are the battle ground of last resort in nearly all that pertains to modern effort and human welfare. Let the cause be one of law, business, politics, morals, religion, science, or what not, there seems to come a time in the affairs of men when the elements which give vitality to the questions involved are brought up for final adjudication; discussed and combated with all the zeal, fervor and intensity possible, before one or other of the judicial bodies representing the majesty of government.

These seats of justice are, especially in the

*Read at 53d Annual Meeting, Chicago, May 30, 1903

provincial districts, the veritable post-graduate schools of instruction for the adult population, and furnish the climax in all that pertains to the most decisive knowledge and final settlement of things.

The writer is informed that even in the City of Chicago, compulsory attendance, on occasion, of men of wealth and business influence, has finally resulted in a strong desire on the part of that very class to participate in such duty, especially that of the grand jury, in that it has been discovered that the information there gleaned is of inestimable value to these very parties who at first scorned the position as one of mere disagreeable duty.

If one will but stop to think of it in the proper light, he cannot but understand wherein these forums of popular interest and dispute present the very best opportunity for an educational effort of wide-spread and important character. They are often the scenes of scientific debate and decision of the most strenuous and practical nature. Practical, not only in the sense of elucidating the actual facts, but because they involve in their application the greatest of material or personal interests, and carry with them the weight of an indisputable authority that is final in its effects on individual or corporate weal or woe.

In this school of intense practicality and decisive human reason and judgment, the members of the medical profession are constantly constrained to take an active part both as instructors and as pupils. The latter position is generally incidental to the former, but is none the less impressive and useful for all that. When therefore we recall what has been so frequently said respecting the desirability of our instructing the public to a proper appreciation of professional learning and judgment, and a just recognition of the qualifications we claim, we should not allow such opportunities as these to pass without an exhibition of that dignity and character which insure respect and confidence. We should not overlook this most arable of all fields in which to sow the seed of fruitful conception. There are, indeed, no other circumstances perhaps under which the medical man is listened to with as pro-

found an interest and intensity of application. His audience is usually both intelligent and appreciative. The momentous nature of many of the interests at stake makes his words only less absorbing than under circumstances enshrouding the serious illness of one's own kindred, or the pronouncements of the court itself.

In his capacity as an expert witness the physician or surgeon is able to do much in the way of upholding the honor and general usefulness of his profession in a critical and judicial, as well as technical capacity. In fact it may truthfully be said that in many instances his is the really dominating influence in judicial determination, and a conscientious regard for truth, together with a modest display of logical, analytical resource, must enhance further popular esteem for the thorough training and commanding aptitude of the profession generally.

Through all such deliberations in which the physician is necessarily a prime factor, he subserves at the same time his own, his profession's and the public's best interests. Through them the opportunity is given for reaching the public conscience and understanding, and impressing all alike with the general applicability of a wide scientific culture.

Not long ago, it happened that one of those all-pervading results in cases of abortion gave a colleague the opportunity for a most profoundly impressive lesson in both science and morals. He modestly but forcibly gave a clear and accurate exposition of the dangers associated with such efforts, the meaning of sepsis in its varied forms, the need, when such is threatening, of having in charge a man of competent learning, and so profoundly impressed his interested audience that even the attorneys forgot, in their eagerness, to raise objections. In contrast with this came an experience during a murder trial in my neighboring county of Tazewell, in which an imported specimen of another class of practitioners was called upon to define a delusion. His reply was, verbatim, as follows: "It is where a person who believes that the act committed by another individual or any individual to be other than an act that a sane individual would sup-

pose or know to be an act of a sane person." Upon further questioning this witness admitted that he had not formed his opinion of the defendant's sanity upon the hypothetical case, but partially upon previous knowledge. Whereupon the court, at the instigation of the State, very properly ruled out the whole testimony of the gentleman, to the amusement and disgust of the expectant audience.

Such evidences of professional incompetency are humiliating to the individual, and detract likewise from public respect and esteem for the members of his calling in general.

In attempting to secure the ends of justice the technical knowledge of the medical man is thus frequently invoked, and he should be prepared, in the interest of the court, his profession and himself to acquit himself creditably.

In the presence of these tribunals he finds himself face to face with a variedly expectant and critical audience composed not only of the judge himself and litigants or prisoner at the bar, but of the unenlightened jury, a coterie of knowing attorneys, and a mixed collection of the general public. For the time being he finds himself the observed of all observers, and in the position first of a teacher, and then of a pupil, to be jostled first one way and then another by the questions of designing lawyers and interested prompters, whose aim is to confuse and mislead, and often humiliate, him, in the interest of the claims which they severally represent. There is no green-room examination in the curriculum of medical education, or discussion in technical society conclave that is comparable to this trying ordeal of pointed questioning and criticism. It has been often said that fools may ask questions which wise men cannot answer, and a sophisticated attorney point interrogatories insusceptible of direct affirmation or negation, but the fact remains that in the arena of the civil courts there is no excuse. The expert witness is bound to recognize the fact that expert testimony implies conception of actual facts, and a power of comprehensive analysis and explanation far transcending the simple demands of ordinary practice. In these arenae are often fought the

battles of the giants of medicine and law, the strenuous purpose being on the one hand to elucidate truth, and on the other to defeat opposition by all the gifts of ingenious hypothesis and stern logic.

With the opportunities presented it is possible for the physician to teach much and learn much. But it is what he there learns that best enables him to teach. And that is one of the points the writer wishes especially to have borne in mind. It recalls a sadly neglected feature in medical education. The student is not pointed to his requirements in this special relationship. He should be taught to keep in touch more with the debatable features of his calling; the border time of fact and fancy, and thus become a keener thinker and more discriminating observer. It is this direct educational influence of experience in the courts that makes them of value to the doctor as well as to the public. It enables him to see himself as others see him, and measure his own qualifications in self-defense. It sharpens his wits, and compels him to take such an account of observation and experience, recorded facts and hypotheses, as will meet the demands of critical juxtaposition. Experience of this kind leads him to think, reason and speak more concisely, comprehensively and accurately as to the whole range of the relation of the subject than he is accustomed to doing, and makes him especially wary in statement and in drawing conclusions. One of the lessons taught him is that the methods of his own special guild might be improved upon if patterned in some degree after that of the civil tribunals, thus preventing unguarded statements and holding their authors more strictly responsible through fear of losing definite cast. He becomes aware that sufficient time is not usually given for the discussion of professional topics, such as would be the case did reputation or fortune rest on the result. It is that fact of enforced vital interest that makes the action of the courts so vastly more impressive and substantial.

This phase of professional responsibility is of especial importance, in that it concerns the average general practitioner as well as the specialist. He must learn the demands of his civil tribunals and be prepared to meet

with credit the requirements from him under the extreme methods to which human passion and human effort may resort in the hour of animosity or despair.

To the thoughtful physician, more over, there comes in this connection the knowledge that with each passing year this feature of professional responsibility is growing more and more important and exacting. The advancement in medical and surgical science and art during the past quarter of a century, and the associate development of industrial and altruistic combinations with their responsibilities before the law, have not only not lessened nor simplified, but have rather increased and complicated the duties of the profession in relation to litigation of all kinds. There is scarcely a court in any circuit of the State that is not with every term enlivened by the presence and participation of members of our profession in one way or another. The medico-legal controversies of life insurance complications, for instance, present an ever widening field for the application of professional knowledge and skill, and one that is destined to test to its utmost the capacity of the physician for correct discernment, and clear exposition along the lines of popular comprehension. A case in mind in the circuit court of the writer's own County involved and turned upon the decision of the question whether the absence of albumen from the urine of the insured for a period of three months prior to his acceptance was conclusive evidence of his freedom from Bright's disease. The number of professional expert witnesses involved was considerable, and it is safe to say that such a scrambling for information as to disputed points in the pathology, history and symptomatology of this disease was never before known, and it is equally safe to say that both the professional participants and the large audience present will never forget the points made, and likewise be long in forgetting the discomfiture of witnesses caught napping in their scientific data. Here was illustrated the desirability of a wholesome familiarity with the inaccuracies and mere suggestions, of science, irrespective of their application to the particular case, and the professional need of caution and wisdom in attempting to make

clear the probabilities without commitment to any untenable position.

There was a time not more than a generation ago when the alienist alone held most of the professional honors before our courts: diversified, however, by an occasional suit for mal-practice in the adjustment of certain fractures or the like. But nowadays the call for expert medical testimony has extended in numerous directions, and corporate and individual interests of various kinds constantly compete for the mastery under the more or less guiding influence of medical men.

It is for that reason, and under such stress, that the greatest scientific accuracy is demanded of the doctor, and his deportment needs be such as to sustain the honor and intellectual supremacy of his profession, and impress the public as well as his professional confreres of the law, that he is equal to any emergency when truth alone is to be evolved, and that while he professes no infallibility he is ready to defend, while frankly admit the shortcomings of his science, and yet maintain his own dignity, fairness and self-respect.

In the light of certain of its bearings, the writers conceive no medical man to be out of his element in this section. In view, therefore, of the impressive and far-reaching influence of these increasingly frequent scenes of medico-legal import and controversy dwelt upon, covering as they do all phases of professional knowledge, it has occurred to him to suggest that this important section be made still more important in the State society by inaugurating a systematic effort to delineate and illustrate the current medico-legal phases of professional life. It would certainly seem to be an inspiring theme for a standing committee, or the like, to take up and develop. Thereby could be secured and tabulated a list of the important medico-legal questions coming before the several courts of the State, together with the judgments, if any rendered thereon, for review and discussion at the subsequent annual meeting. It would make one of the most attractive features of any program, for every one is interested in such vitally conclusive concerns. There is enough of both comedy and tragedy in most of them, as those who

have watched the courts well know, to afford a liberal education in the arts as well as the sciences, and in their reaction to place the medical man in a more influential position before the public.

Discussion.

The Chairman: Dr. Moyer, not being here it will devolve upon the members present to offer any discussion they see fit. Dr. Moyer was to lead the discussion of this paper. If no one wishes to discuss the paper I will ask Dr. Will if he has anything further he wishes to offer.

Dr. Will: I have nothing further to add, Mr. Chairman, except to say that in my recent experiences in court I have observed the wonderful opportunities physicians have to educate the general public to an appreciative understanding of the medical profession, and it was for that reason that I presented the paper.

THE DIPLOCOCCUS SCARLATINAE.*

BY W. J. CLASS, M. D., CHICAGO.

In presenting this paper it is my intention to call attention to the aid which the recognition of this germ furnishes in the diagnosis of scarlet fever, and also to point out some of the difficulties which the novice will encounter when he begins his investigations, and which may under certain circumstances cause him to give up the search in dismay as a fruitless one. It is due in part to these difficulties and in part to a certain carelessness which has caused some observers to abstain from following my methods to which the failures to identify this germ may be attributed even in the hands of those who have not been prejudiced against it for some reason or other. The finding of the diplococcus scarlatinae is of especial value in order to arrive at a diagnosis in two classes of cases of scarlet fever. First:—Those cases where the rash is either altogether absent or so slight in degree as to afford but a poor clew to the nature of the disease. Second:—Those cases where an abundant rash is present which is either atypical in its characteristics or appears without being accompanied by the other cardinal symptoms of scarlet fever. In regard to the first class of cases, a large experience with them has taught me and other observers who have investigated this sub-

ject, that scarlatina without eruption is much more common than has been generally supposed to be the case. No doubt every gentleman present has noticed that it frequently happens where one person in a family has typical scarlet fever that other members of the same family become afflicted with sore throats of various degrees of severity without the presence of any rash whatever. Since such cases of scarlatinal angina occur in the presence of scarlet fever is it not reasonable to suppose that isolated cases may be found where the connection with typical scarlet fever is not so clear? And they do occur quite frequently, especially during an epidemic of scarlet fever, but are extremely difficult to diagnose unless a culture is made and the diplococcus scarlatinae is found present. That these cases are really scarlet fever has been proven aside from the finding of the micro-organism, by the fact that they are frequently followed by desquamation and nephritis and by the contagion from them giving rise to typical scarlet fever in others. That the recognition of these cases is of importance as a sanitary and prophylactic measure is perfectly obvious. To the second class belong those cases of scarlet fever in which the contagion enters through wounds either operative or accidental, and where we have a rash and rise in temperature, but where the sore throat, strawberry tongue and other symptoms of scarlatina are absent; also those cases where the rash is sudaminal in character or otherwise atypical. In these cases the finding of the diplococcus scarlatinae is a great aid in diagnosis, and the proper isolation of the case should be a surgical patient in a large hospital may obviate a disastrous epidemic. Having now mentioned the diagnostic aid derived from the identification of this germ I wish to dwell upon the difficulties sometimes attending it. Before entering upon this subject, however, I would like to state, by way of parenthesis that it is impossible to say as a result of a simple microscopical examination that a given case is or is not scarlet fever or diphtheria or tuberculosis. All we can say as a result of our examination is that we have found such a germ or what appears to be such a germ and therefore the case is probably scarlet

*Read at 53d Annual Meeting, Chicago, May 30, 1903

fever, diphtheria or tuberculous. In order to be positive of our diagnosis other signs have also to be considered. To resume—The diplococcus scarlatinae as seen in primary cultures usually appears as a very large diplococcus at least four times as large as an ordinary staphylococcus. This form occurs in about 90 % of the cultures if made early in the disease, and can as a rule be easily differentiated from other large cocci. The following may, however, occur. A culture is made upon blood serum, from the throat of a patient having typical scarlet fever. This culture is placed in an incubator and examined after 12 or 24 hours and no large diplococci are seen; the field apparently consisting of nothing but small staphylococci, with perhaps here and there a streptococcus. This has occurred to me a number of times and I have reported that the germ was absent. These apparently negative results were due to one of two things. Either to the change of form to which this germ is especially prone as I have repeatedly pointed out in previous articles, or else to the fact that it did not take the stain and so escaped recognition. To obviate this latter difficulty it is necessary to study the field very carefully, when the outlines of the large unstained diplococci which are usually found in small clumps can be made out. The first mentioned difficulty will seldom occur if my earth agar is used; should such be the case, however, the culture is to be transplanted and a subculture made which will as a rule show the large cocci, although sometimes several transplantations are necessary. It is also a good plan when the primary culture fails to show the typical diplococcus to isolate the germs composing the culture by means of the plate method when the cultural characteristics of the organism such as its glutinous character and the fact that it does not affect milk in its growth will prove a great aid in its recognition. Of course these latter methods require time and technical knowledge. Simple transplantation will usually suffice. It should be borne in mind that the best results are obtained when the culture is taken early, before antiseptics have been used or before the other germs present in the throat have had a chance to multiply

and outgrow the diplococcus scarlatinae. Before closing I wish to state that I am more firmly convinced than ever that this germ is the causative factor of scarlet fever even though the results obtained by certain investigators have apparently been negative. One class of critics has stated that there is no such germ to be found in scarlet fever as the one I have described, while others equally competent have stated that this germ is found not only in scarlet fever patients but that it has a very wide distribution being present in all healthy throats and in numerous other places. It is, therefore, clear that one or the other set of critics are mistaken and probably both. Bacteriology is as yet in its infancy and there are many problems connected with it which still remain to be solved. The chief problems are those which relate to the causes of the widely differing degrees of virulency possessed by the same germ under different conditions; the other relates to the different forms which micro organisms assume at various stages of their growth. In the early days of bacteriology it was supposed that a given micro-organism would always present the same characteristics; now we know that the same germ may present a great many different phases. Thus there are members of the colon group of bacilli which in every way resemble the typhoid bacillus but are perfectly harmless and devoid of virulency. Again there are frequently found bacilli in the normal throat identical with the diphtheria bacillus in morphology and cultural characteristics, but which cannot produce diphtheria. This fact applies to the majority of the known pathogenic germs. In this connection I will briefly narrate the celebrated controversy which followed closely upon Koch's announcement of his discovery of the cholera bacillus. When Koch published the description of the cholera bacillus and sent cultures to various laboratories investigations of different water courses were made, when lo and behold a number of bacteriologists of good standing announced that the so-called cholera bacillus of Koch could be found in almost every ditch and river throughout Germany and could not therefore be considered as the causative factor of chol-

era. In fact these bacteriologists considered it as quite a joke that Koch should travel all the way to India to discover a bacillus which could be found in every mud puddle and old cheese at home. It is extremely probable that if Koch had been a man without an established reputation his bacillus would have had the same fate as Sanarelli's bacillus of yellow fever, namely, to be ridiculed into oblivion, and to this day the cause of cholera might have remained a subject open for discussion, especially as it is very difficult to reproduce cholera in animals with the Koch cholera bacillus. As it was, however, further investigations showed that the spirillae found in Germany were slightly different from those discovered by Koch, although probably belonging to the same family. I allude to these circumstances because they illustrate the failure of some observers to obtain the same results obtained by others. The same rule applies to the diplococcus scarlatinæ. Unless a great number of experiments are made the observations of different investigators will, in all probability be at variance with each other. What is needed is to study the germ and the disease side by side in order to appreciate its different phases. The conclusions drawn from the study of a given culture in the laboratory alone are worthless and unfair.

Discussion.

Dr. Gehrman: Mr. Chairman, it seems to me that the great difficulty in getting this question settled is the pathogenesis of the organisms that Dr. Class has isolated from the throat in scarlet fever cases. The report seems to show that the organism is present—three or four hundred cases my recollection is the organism was present. I have myself felt that it is pretty hard to diagnose scarlet fever by an examination of the throat, and finding the organisms there, but leaving that aside we have to be actually sure that these are pathogenic organisms, having particular and peculiar characteristics. Of course there are the questions that pertain to other diseases along exactly the same line. We cannot always get exactly the same effect upon men that we do upon animals. In regard to cholera and typhoid fever this difficulty exists, but on the other hand we have these organisms in cholera and typhoid fever showing very distinct characteristics, and under general circumstances of cultivation distinct pathogenic properties. At one time we attempted to show the pathogenic properties of these organisms cultivated from scarlet fever. Inoculations of pigs were made, and in this case we did get the form of mild septicaemia.

Now, in these experiments the thought came to me, as it probably would to anyone, whether we are dealing with a distinct, individual virus, or had we carried something else along through the cultures from one to another—something that we were unable to recognize. I think that is an extremely difficult point to settle when we are conducting these experiments.

Now in regard to desquamations, and other conditions in which there may be erythema, I am inclined to look upon scarlet fever as a very definite and distinct condition, and where we see desquamation and erythema in surgical cases, wounds and so forth, we are getting evidence of sepsis, with simple toxemia, showing itself in the irritation of the skin. Of course we can't do like the experimenters with yellow fever, who take the patients and expose them, in making these experiments, and try to prove something definite. If we could do that we would probably settle the point. I would like to see something definite brought out in regard to these organisms, but at present I feel that it is a difficult matter.

George Weaver: During the past year I have had an opportunity to make some bacteriological observations in connection with the skin and throat in scarlet fever. When these observations were begun the cultures were prepared from the throat and skin upon various media, and from such cultures from the throat and skin cultures preparations were prepared, and examined in the ordinary manner. I found in these preparations very frequently, and in a large proportion of such preparations large cocci in pairs and fours, which I supposed naturally were the scarlet fever diplococcus. From such cultures prepared from the throat plate cultures were made, and from those plates the various forms of cocci present were isolated in pure culture. In the third operation it became apparent that these large cocci and different sized cocci were not single organisms, but were distinct and different bacteria. From the skin cultures were prepared in this case by means of the plate method in some eighteen cases, and from these large diplococci were obtained to the extent of about 25 per cent. The ordinary staphylococcus was obtained in a large proportion of the cases, being by far the most numerous. Cultures from the throat were in the same way prepared, and fewer cultures of large cocci in pairs and fours were obtained in a large proportion of cases. It was found, however, that when these large cultures were studied in detail, that there were very few of them which were identical. There was a large number of entirely different bacteria, which, in the original smear preparation appeared to correspond with Dr. Class' distinction. These organisms, when studied as to their growth and staining properties were found to be entirely different. After going at the question in this way, with the distinct purpose of finding the scarlet fever diplococcus, if possible, I was obliged to come to the conclusion that there was no single diplococcus corresponding to Dr. Class' description, and which were present in any large proportion of cases in the throat, and especially, in

these cases of scarlet fever, in the skin. In regard to the diplococcus appearance which is presented by the ordinary staphylococcus, it is not very uncommon for cultures of the staphylococci, when they are growing rapidly especially, to show a distinct line of division, so that we have an apparent diplococci appearance. During the early part of the year, also, another thing which made me still further inclined to feel that Dr. Class had made some mistake similar to that which I had made in the first place, was when I came to examine the cultures which Dr. Class very kindly gave me for the purpose of comparison. He gave me in February two cultures of the diplococcus scarlatina, for study, and as they grew upon the agar they looked almost identical. From these cultures, however, after they had been studied in detail it was found that we had to deal with two entirely different bacteria. One of the cultures grew in gelatine at a low temperature without liquefaction. It produced acidity of milk without coagulation, and grew in milk. The two organisms were entirely distinct and we observed that neither of them changed their characteristics in any way. None of the pure cultures which I obtained from the throat in these cases of scarlet fever changed their morphological peculiarities. The general character of the organisms was not varied. It seems to me that under these circumstances the bacteriologist today would not be willing to accept these various forms of bacteria which are found in the throat in these cases as variations of one form. It seems to me that there must be something more definite and constant regarding the characteristics of the organisms before we can say that it is a distinct organism. As far as the pathogenic properties of the organism are concerned, the effect upon mice of the inoculation of bacteria is very uncertain because in the simple handling of the mice, the animals being small, are very easily injured, and it is the general experience that the controlled animals very often do as well as those that have been inoculated. In regard to the effect upon other animals we can only point to certain facts in the history of the study of scarlet fever. We had the bacillus of scarlet fever described by Edmonton in 1887, when he found scarlet fever germs in the skin, which he grew in pure culture, and which he inoculated into calves and produced a disease identical in every way with scarlet fever, including the eruption or desquamation. A little later or at the same time, Klein described his streptococcus of scarlet fever. This organism inoculated into lower animals, particularly into calves produced a disease corresponding exactly to the scarlet fever including the lesions found in the kidneys, so that we have at least two other organisms which have been inoculated into lower animals, and produced diseases which are said to be exactly similar to scarlet fever as it occurs in man.

Ludwig Hektoen: I have but very little to say in addition to what has been said on this subject by Dr. Gehrmann and Dr. Weaver. I agree fully with both of them in their remarks. No matter what stand we take with reference to the diplococcus as a class, it has not been

shown by definite experiments that it can cause scarlet fever. It is also very significant indeed that, when the skin and tonsils have been studied carefully by competent bacteriologists it has been impossible to find present any one single organism in at least a majority of the cases, except possibly the streptococcus in the case of the tonsils. In this connection, however, we must remember that streptococcus is normally present upon practically all tonsils, or at least upon a majority, but we do not need to discuss at this time the relation of streptococci to scarlet fever.

In cultures from the skin, in fifteen cases of scarlet fever Dr. Weaver failed to find the coccus of Class in a single case. Dr. Dreyer had the same experience in a series of cultures from the skin in thirty-seven cases of scarlet fever examined in all the stages of the disease, early as well as late. Dr. Weaver failed to find the Class coccus in a single one of eighteen cases of scarlet fever in which he made a thorough study of the bacteria upon the tonsils. In nearly two hundred cases of scarlet fever in which I have examined the blood bacteriologically during life by the most improved method the Class coccus has not been isolated. When the various single cocci and diplococci found in the smears from the tonsils and the skin of scarlet fever, isolated in pure cultures and grown upon various media it is found that it contains a large variety of different kinds of staphylococci, and sarcinae, no one of which occurs so constantly that it can be given any etiologic importance. The biologic variations in the bacterial form are too great to be explained by the variability of a single coccus, even though that coccus be granted to possess the great range of morphology claimed for the Class coccus by Jacques, who says it may occur as a streptococcus, a staphylococcus, a diplococcus, and even as a bacillus—almost. That the staphylococcus albus causes scarlet fever owing to change of environment, and then invades the blood, is not supported at all by the results of an examination of the blood during life, which very rarely revealed the presence of this coccus, which then is accounted for readily as the result of contamination from the skin or air.

In view of these facts I regret to say that it does not seem to me that there remains any basis whatsoever for the claims of Class and Jacques, that the cause of scarlet fever is the coccus of Class.

E. H. Ochsner: I have of course no right to speak on the question of the cause of scarlet fever from a bacteriological standpoint because my training is not such that my remarks would bear any weight if I should speak on that subject, but I have had occasion twice to give Dr. Class a severe test in the matter. Of course this does not prove anything absolutely but to a certain extent it goes to help prove it. Some three years ago shortly after Dr. Class published his first article upon the cause of scarlet fever, I had occasion to operate upon a boy. The operation was perfectly normal, and there was nothing peculiar about it, but within thirty-six hours after the operation, he de-

veloped a temperature of 104.6 and he was frightfully sick. I immediately thought that we must have a case of septic infection, but knowing of Dr. Class and his work, I sent for him to make an examination of the blood. Within twenty-four hours I got a report that the young man had scarlet fever, and if I ever saw a case of scarlet fever that was typical, this was a typical case. Several competent men saw the case and not a single doctor dissented from the diagnosis of scarlet fever. It could not have been ordinary sepsis because ordinary sepsis caused by the streptococci, beginning so violently, would have caused death. I never have seen a case of septicaemia where the peritoneum was involved of such severity, that ran a course of this kind. Had the infection been in another portion of the body, the argument that it might be ordinary septicaemia could be tolerated, but involving the peritoneum cavity as this must have done, the argument would not hold. As I said before, the case was absolutely typical of scarlet fever. The boy developed the ordinary rash, and the same micro-organism was found in the skin.

About a year afterwards, I had a case very similar to this one, except that the operation consisted in the removal of a piece of dead fascia from underneath the Os Calcis. In this case again, Dr. Class said he had found the diplococcus of scarlatina, and the patient ran an absolutely typical course. Some time ago, in talking with one of the most prominent pathologists of this country on this subject, he made the statement that in his opinion, scarlet fever was caused by a variety of micro-organisms. This contention does not seem reasonable to me. It is a contention that was made, so far as I know, with reference to every bacteriological disease. For years we heard the constant contention that diphtheria was caused by a variety of micro-organisms, until finally the real cause of diphtheria was isolated. A disease which runs such a typical course as scarlet fever must be caused by one organism, just as we have reason to presume that a typical case of typhoid fever is carried by one micro-organism, or as we have reason to presume—not proven—that smallpox is caused by some one organism.

One question I should like to ask bacteriologists is whether they have actually used the culture media that Dr. Class has recommended. Investigators frequently try to obtain the same results in a manner diametrically opposed to that described.

L. Hektoen: Mr. Chairman, I can say with reference to Dr. Ochsner's question in regard to the methods that are used, that in our laboratory we have endeavored to follow the exact methods proposed by Dr. Class. I think that Dr. Ochsner makes a wide statement, when he says that all investigators, as a general rule are apt not to follow the methods of those whose work they attempt to corroborate. I think that is a very wide statement.

Dr. Ochsner: I think I said that that is often the case.

Dr. Hektoen: I think that is rather a wide statement, because clearly they could not then expect to get desirable results.

With reference to Dr. Ochsner's statement regarding the cases which Dr. Class made a diagnosis of scarlet fever from an examination of cultures made early, and before the nature of the disease was understood, if I understood him correctly, I would like to point out that that was not of very much value because not made under the necessary conditions. Dr. Class should have been given at the same time similar cultures made from cases of scarlet fever, and then the results would certainly have had much more value, than they have as they stand now. I don't think the question of the diagnosis in those two cases needs to be discussed. I would not question the correctness of the diagnosis for one moment, but in reference to Dr. Ochsner's statement that if one of the cases had been a case of streptococcus septicaemia the patient would certainly have died, it seems to me that that would be a difficult statement to prove, because we know that in cases of streptococcemia in which streptococci are demonstrated in the blood, recovery takes place not infrequently.

George Weaver: In regard to the media used in the preparation of the culture would say that the particular medium, agar, which Dr. Class has described, was used—that is, I made the medium as nearly as possible to correspond to that which he has described. It did not, however, look like the medium which he uses, so that evidently the culture which was used was not identical. However, it seems to me that is not of very much moment, because Dr. Class has described his organisms on various occasions, and his own cultures, which he gave me for comparison grew quite well on ordinary glycerine nutrient agar, as well as on other nutrient media.

In closing the discussion Dr. Class said:

I haven't very much to say—simply that I have been making examinations as a routine matter, to diagnose scarlet fever in cases in which I have had no history whatever, and my results have been such that I could not accept the statement of Dr. Hektoen or Dr. Weaver as final in regard to this germ not being the cause of scarlet fever. My results have been so good that my faith is quite firm. Of course further investigation will show.

SEWAGE DISPOSAL FOR INLAND TOWNS.*

BY ARTHUR N. TALBOT, M. D.

Professor of Municipal and Sanitary Engineering, University of Illinois.

The city is the popular habitat of man today. Country population is almost at a standstill. Urban population is multiplying. Recent commercial and industrial development has given added impetus to city life, and the future promises an accelerated

*Read at 53d Annual Meeting, Chicago, May 30, 1903

growth. Fifty years ago only 10% of the population of the United States was in towns and cities of 8000 people or more. Today more than one-third of our population reside in such towns and cities, and if to these be added residents of ambitious towns of at least 2000 (very properly included) it may be seen that the time is not far distant when one-half of the population will live under city conditions.

Old cities were pestilence breeders. Modern cities, especially the smaller cities, ought to be models of healthfulness. Science, sanitation, and improvements in hygienic conditions have made the city habitable and may make the smaller city even more healthful than the country. The present standards for the sanitary condition of cities are in advance of those of even a few years ago. Private ideals and public requirements are higher, and modern houses, tenements and factories, streets, water supply, and public works are constantly tending toward better sanitary conditions. Comfort and convenience, private and municipal pride, as well as considerations of health, work for this desirable end.

In all work for improved sanitary surroundings, the one great ideal, the desideratum in every line, is cleanliness. Cleanliness involves healthful surroundings and sanitary conditions, personal cleanliness, public cleanliness, common and universal cleanliness; especially universal cleanliness, for in this respect we are utterly dependent upon the habits and conditions of the strange delivery boy and the unknown and unseen and perhaps ignorant and careless workman. Much that is sensational and unreasonable and truthless has been written in recent years concerning sanitation, and physicians have perhaps been the worst offenders; but every development of sanitary science emphasizes the importance of cleanliness in every relation and of properly disposing of all filth, waste and excretion and of preventing access to these by insect, animal, or person.

One of the most marked changes in the health condition of cities has been made by the introduction of sewerage. It is difficult to realize the filthy condition of the city of

a century ago. The water carriage system of sewerage has metamorphosed city conditions, and defective though its arrangements frequently are it has been a great factor in urban purification. Prompt and nearly automatic removal of wastes and prevention of pollution of soil, water and air are important characteristics of an efficient system of sewerage. Even in our smaller towns the sanitary necessity of sewerage as well as its hygienic advantage and convenience and utility, is now realized.

A large and troublesome problem in our inland towns, and one which is quickly growing more pressing, is the disposal of the sewage at the end of the sewer. Streams which have served as a receptacle for a small population become unbearably bad when the amount of sewage is multiplied a few times, and conditions allowable in primitive days seem barbaric as more enlightened ideas prevail. The growth of so many towns away from large rivers and lakes has made the proper disposal of sewage of the most important problems of sanitary engineering. The question is not one of appearance alone; scientific developments indicate that it has an important bearing on health conditions. It involves the sanitary requirement of cleanliness.

The purposes involved in the disposition of sewage are dependent upon the location of the city and the size and use of the stream into which the sewage or the purified effluent is to be discharged. Based in the order of usual applicability the purposes may be stated to be: 1. To avoid a nuisance; 2. To promote general sanitary conditions; 3. To convert objectionable organic wastes into harmless forms and to destroy pathogenic and harmful bacteria. The possibilities of sewage utilization as a commercial investment were long ago shown to be nil for all usual conditions, and the cry of wanton waste of nature's resources is idle and misleading. Generally, the purpose first stated is the occasion of the first steps taken by a town in the purification of its sewage. The perfection of sanitary conditions is a far more important reason. As time goes on and the public conscience quickens, our inland cities must make considerable ex-

penditures in plants for the treatment of sewage. In this work, while scientific and sanitary principles must not be violated, the engineering features involved in economic construction and operation must be given proper consideration.

Sewage, the foul water carried through sewers, is diverse in its composition, varying at different times and having widely different composition for different cities, dependent upon the quality of the water used, the nature of manufactures and industry, the fall and velocity in sewers, combination with or separation from storm water and street washings, etc. The amount of water used by a city largely governs the strength of the sewage, and sewage of the ordinary American city is much more dilute than that of an English city. Sewage is not very foul; that of the average American city contains only 20 to 60 parts of foreign matter in 100,000 parts of water. Although the solids are thus relatively small the total amount is large. The relative proportion of solids in suspension and in solution also varies, and the character of the sewage in this respect has a bearing upon the system of purification to be adopted. Generally speaking, soft waters, industrial wastes, high velocities and falls tend to reduce the proportion of suspended matters and to increase the dissolved ingredients, while hard water, domestic sewage, and low gradients give higher proportions of suspended organic matter. This is especially noticeable with the sewage of some cities which are supplied with deep well water. Organic impurities form the principal part of the suspended matter, the average for several American cities being given as 71% of the total matter in suspension; but in domestic sewage, having the suspended organic matter high as compared with the dissolved, the percentage of suspended organic matter may reach 80%. This is an important feature, and it will be seen that sewage having high percentage of suspended organic matter like some domestic sewage, is more readily purified than sewage in which dissolved organic matter predominates like many manufacturing wastes and the domestic sewage of other cities.

The strength of sewage and the percentage

of matters in suspension must be considered in comparing the various processes of purification. It is desirable also to know the character of the organic matter in the sewage, whether it readily putrefies, or whether it contains a considerable amount of stable compounds. Generally speaking, the inorganic constituents are unobjectionable except as they may interfere with purification processes or require removal.

Before taking up the various processes of sewage purification, stress should be laid upon the statement that the purpose and end of sewage treatment will affect the choice of process. The most common aim is to secure an effluent or mixture in the stream so low in organic matter, or having the organic matter in such stable form, that no nuisance, offense or injury may be given by the water to the lands adjoining the stream below the point of discharge. A more stringent requirement is that the water of the stream shall not be injured for the ordinary purposes of manufacturing by such discharges. A still more stringent requirement is that the water shall be free from organic impurities and shall contain no germs of disease; in fact shall attempt to fulfill drinking water requirements. No effort will here be made to fix general or standard requirements and the process of purification to be chosen must be suited to local needs. The degree of purification needed is a local question.

Within the past few years new and promising methods of sewage purification have been developed. Experimental investigations have advanced our knowledge of several processes, and experience with new plants has tested theories. The experiments of the Massachusetts State Board of Health and their studies of intermittent downward filtration and other processes, the experience of English cities as well as of a number of cities in the United States with the several biolytic processes, together with many other investigations, have put sewage purification on a more rational basis. Much remains yet to be learned. The earlier studies were unscientific and not systematic. Much of the earlier work in England seems irrational and disappointing, and considerable expenditures of money there have practically been

wasted or badly invested. However, the processes which have been developed within the past few years are far better and it is believed that they are based upon proper principles.

The principal methods of treating sewage may be included under the following heads: Dilution, chemical precipitation, irrigation, intermittent downward filtration, and the so called biolytic processes which include the septic tank and bacteria bed, the contact bed, and the various forms of continuous filters. There are many variations and combinations of these processes: thus, dilution may follow chemical precipitation, and the biolytic processes may be preliminary to filtration or even to dilution. In discussing these methods the terms will be used as follows: Dilution involves the discharge of sewage into a body or current of water of such magnitude that the organic constituents of the sewage may be reduced to stable forms without giving offense or injury. In chemical precipitation, matter in suspension (both organic and inorganic) is precipitated as sludge in large tanks through the agency of chemicals and sedimentation. Irrigation implies the application of sewage to growing crops in limited amounts. In intermittent downward filtration, sewage is applied in large doses intermittently to specially prepared beds of porous material. Biolytic processes include those where bacterial and other biological activities are especially prominent. While biolytic action forms a considerable part of other processes, such as dilution and intermittent downward filtration, it is more marked and rapid in those to which this name is given. The septic tank, contact bed, etc., will be defined as they are discussed.

Discharge into streams and bodies of water has been a common method of sewage disposal. It has long been known that where conditions are favorable there is a considerable self-purification of sewage-polluted streams due to the biolytic action of vegetable and animal organisms, and the chemical action accompanying it and made possible by these conditions, but there has been little definite knowledge concerning the dilution necessary to prevent putrefaction nor yet the requirements of time and distance to pro-

duce the required results. A statement quite commonly made is that the flow of water of the stream should at least be equal to 1500 to 3500 gallons per day per person or 2 to 5 cubic feet per second per 1000 persons contributing. This is also stated as a dilution of 15 to 40 times. One authority says the stream flow should be at least 100 times as large as that of the sewage. Even with large flows the cumulative effect of sludge deposits from crude sewage in sluggish streams may give objectionable results. It is easily seen that the requirements of flow mentioned above bring most of our prairie cities into the list of towns requiring sewage purification. Fortunately, however, a process which takes out the suspended solids of the sewage will give an effluent which may be discharged into a stream whose flow is less than the above required amounts, and the depositing of sludge in the stream is avoided. Many streams now receiving crude sewage are badly polluted.

Chemical precipitation is applicable to special manufacturing wastes, but for domestic wastes it has been replaced by other processes. It takes out perhaps 90% of the matter in suspension and 10% of that in solution. In addition to the expensive construction involved in the plant and the expense of operation both for chemicals and for labor, the removal and disposition of the sludge is a difficult problem. As there is no reduction and no change in the impurities, their amount and the chemicals used result in a great bulk of sludge, which is a source of great expense and annoyance. Besides, this process is wrong in principle; the chemical is a disinfectant tending to preserve the organic matter and postpone its decomposition, while the ideal process reduces the organic matter to inorganic forms or aids in transforming it into stable compounds. The development of the septic tank has given a process which very much lessens the sludge problem and makes the cost of operation very much less. Except for special conditions, chemical treatment of sewage may be said to be a thing of the past.

Broad irrigation requires porous soil, low rainfall during crop season, and large areas of low, flat, cheap land. This process is use-

ful in the far west, but for this region conditions favoring its adoption are very rare. The results of the experiment at Pullman illustrate the difficulties. With any but sandy soil, "sewage sick" fields are common. The large areas involved make the investment very heavy. In fact the term sewage utilization has comparatively little part in sewage disposal.

Intermittent downward filtration continues to give satisfactory results, and where local conditions permit its use it has no superior. The process requires a very porous bed, like sand or gravel, well drained, uniform in make up, and situated where the sewage may be readily applied. Where such beds can be made from sand already in place, the cost of construction is not extremely large; but when artificial beds are constructed with considerable length of haul for the material the cost becomes very great. A high degree of purification may be effected when the beds are properly operated. At some Massachusetts towns 90 to 95% and more of the organic matter is removed and 95 to 99% of the bacterial content of the sewage is taken out. The effluent is clear and bright, and may be discharged into a small stream.

The method is particularly applicable where the effluent is to be discharged into streams which are to be used as sources for water supply.

A considerable area is required for the beds. From 20,000 to 100,000 gallons of crude sewage per acre per day may be applied to a bed of good material, but for poor material the quantity must be much smaller. For a town of 20,000 people 20 to 100 acres of beds would be required, and except for extremely favorable natural conditions the construction involved would be expensive. By using some preliminary process, however, a much larger dose may be put upon a given area and the total expense would be cut down.

The permanency of intermittent downward filtration beds is generally taken for granted, though there is a silting up of the upper layer. Even though the surface is occasionally stirred, a layer must be accumulating which is different from the original

sand, and this may eventually affect the efficiency and capacity of the beds, except for very slow filtration. While it is held that most of the reduction occurs in the upper 9 or 12 inches, a depth of 5 feet is generally considered desirable to insure high efficiency.

A difficulty attending the use of coarse filtering material in intermittent downward filtration lies in the proper distribution of sewage over the surface of the bed. The principle of the working of such beds implies the gradual sinking of the sewage into the bed, not saturating the beds or filling the voids, but spreading out in thin films over the surface of the grains and being held by capillary action throughout the bed so that each layer of liquid is pushed downward by the next application of sewage, until finally after several doses have been applied at the surface, the first of the effluent is forced out into the underdrains. The process permits contact with air and allows bacterial action, this process being largely a biolytic process. Wherever the sewage merely runs through the bed without being spread out through the voids and held for some time, the purifying effect will be very slight. The method of distribution over the area is then one of the most important matters connected with intermittent downward filtration.

As successful as this process is where local conditions permit its use, it is readily seen that the surroundings of Illinois towns are not such as to make this process available.

Investigations made in the past few years show that it is best to keep the reduction of the coarser undissolved organic matter of sewage somewhat separate and distinct from the treatment of the dissolved organic matter and very finely divided undissolved organic matter. The solids in suspension clog or choke the filters, give off objectionable gases during ordinary putrefaction, and impede filtration processes, since they are but slowly and somewhat difficultly reduced. Organic matter in solution freed from suspended solids may be much more rapidly purified and many times as much sewage may be discharged upon a given area of filter. The biolytic actions involved in the new processes are dissimilar, and hence may with advantage be kept distinct. The one dealing

with undissolved organic matter is mainly anaerobic; that is it is accomplished through the agency of anaerobic bacteria, in the absence of oxygen. The work is large de-nitrifying and liquefying. That purifying the dissolved organic matter is mainly aerobic; that is, aerobic bacteria, requiring oxygen are the active agents of decomposition. The action is largely nitrifying and oxidizing. The septic tank process is the best representative of the first division of purification; the contact bed and the continuous filter of the second. It is readily understood that these two activities may best be kept distinct.

A septic tank is a tank through which sewage flows with a regular and evenly distributed current, the velocity being so slow that the matters in suspension in the sewage rise to the surface or fall to the bottom by reason of differences in specific gravity and are retained in the tank where the organic matter will be decomposed, while the effluent flows out at the other end of the tank. The tank may be covered to exclude light and air, wholly or substantially, and to maintain an equable temperature, or if open the mat which forms on the surface may aid in accomplishing the same purpose. Under the conditions of absence of sunlight and air and under moderate temperatures, immense numbers of anaerobic bacteria develop in the tank. This bacterial growth and activity produces a chemical decomposition of the retained organic matter of the sewage, a reduction of its compounds into parts, a large portion passing off in the form of gases, a part as organic matter with the effluent either in finely divided form or in a dissolved condition, and another part is deposited as silt-like sludge or ash in the tank. A floating mat of light matter generally covers the tank. Devices are used to cause the flow to be uniformly distributed over the cross-section and to prevent surface currents. The effluent should be collected in such a way as to be nearly free from suspended matter.

A septic tank works actively. The crust or mat on the surface may become several inches thick, floating above the liquid of the tank. It is frequently tough and strong, though in some tanks it appears and disap-

pears. The gas given off in the chemical changes rises in bubbles and escapes in the air. When a heavy crust has formed, breaking a hole through and stirring the bottom will cause the escape of a quantity of gas which when ignited with a match burns with a hot flame which may rise three or four feet. The total amount of this gas is very large. An analysis of gas from the Champaign septic tank, made by Professor A. W. Palmer of the University of Illinois, gave the following: Carbonic acid gas 10.1% total volume; marsh gas (CH_4) 55.3; ethane (C_2H_2) 6.2; free nitrogen (N_2) 27.8. No hydrogen sulphide was found, and for sewage from domestic sources no foul odors are found about septic tanks.

A septic tank is thus a fermentation tank. The liquid is "working" much like apple cider does. The putrescible solids are reduced to gases, inorganic or stable compounds, and dissolved solids. The process differs from ordinary putrefaction in the nature of the gasses generated. Nitrogen is liberated and oxygen is not required. The process therefore differs from nitrifying and oxidizing processes.

Some early advocates of the septic tank ignored the sludge problem, assuming that all the solids were carried away, and the claim was made that there would be no accumulation of solids. However, a little thought will show that this cannot be true. Some of the resulting inorganic compounds are of the nature of ash and this matter is carried to the bottom. There must also be deposited the suspended inorganic solids of the sewage, the dirt from the wastes. Together these make a black, muddy looking silt-like deposit. The average of two analyses of sludge from the bottom of the tank at Champaign gave: Water, 60.9%; organic matter 4.4%; inorganic matter 34.4%. The floating matter at the top contained 92% moisture, 3% organic matter and 5% inorganic. The sludge is of little value as a fertilizer, but may serve as filling or top soil.

The accumulation of sludge is relatively small. The amount is difficult to estimate, but from the data available it will probably range from 2 to 6 cubic feet of dry matter per 1,000,000 gallons of the sewage of Amer-

ican cities. Much of this is from the suspended mineral matter of the sewage. A preliminary silt tank for taking out the bulk of this is desirable. An English estimate is that the sludge will amount to about 30% of the total matter in suspension in the sewage. For sewage free from the manufacturer's wastes this is a large estimate. As the sludge is low in organic matter and this little is very stable, the sludge may be disposed of without difficulty by filling on waste land or by plowing in on cultivated tracts. It may even be flushed into the stream at time of high water. The removal is made by pumps, by gravity, or by other means.

A closed tank is not essential to a proper septic action. The floating mat protects the liquid from direct contact with the air, the evolution of gas acts to prevent absorption of air. Sewage generally contains no dissolved oxygen. So far, then, anaerobic conditions are easily maintained. Direct sunlight should be excluded. It is evident, however, that for our changeable climate, with the extreme cold of winter and the intense heat of summer, the enclosure of tanks maintains an evenness of temperature which is quite important. The English open tanks are not subject to these extreme changes nor to much intense sunlight. Sewage in American cities generally reaches the purification plant at a temperature of from 48° F. to 60° F. If the temperature of the liquid in the septic tank rises above 65° F. the septic action tends to become disagreeable. A temperature below 45° F. reduces the bacterial and chemical activity.

There is still much diversity of practice in the size of septic tanks. English tanks have generally been constructed with a cubic capacity equal to 24 hours flow of sewage. It is probable that for American sewage a cubic capacity equal to 6 to 12 hours flow of sewage is ample. The sewage will, then, take one-third to two-thirds of this time to pass through the tanks. Even smaller tanks will give good results except for the filling up with sludge and the covering up of retained matter before it has had the full action of the bacteria. There is still much to be learned in this matter.

The septic tank at Urbana, Ill., was put in operation in 1894. That at Champaign was designed in 1895 but was not built until 1897. These have been successful pioneers. Since then, a large number have been constructed in the United States, and the results are very satisfactory. The English tanks are giving efficient service.

The process is continuous, and self-regulating, no attendance or labor being required except for the occasional removal of the sludge. The effluent is fairly clear, and much more may be discharged into a stream without objection than of the crude sewage. The effluent is in improved condition for further purification. As a preliminary process to take out the coarser suspended solids, the septic tank is by far the most economical and most efficient process, and for many of our inland towns its use will be the first step in purification, and for complete purification its share is also important.

Roughing beds or coarse bacteria beds are beds filled with broken stone or other coarse material into which the sewage runs and stands for 2 to 6 hours, then is discharged slowly. The action is much like that of the septic tank, the solids in suspension being retained in a large degree and are reduced by bacterial action. After a period of rest, the tank is again filled. While there is some opportunity for air reaching the bed between the time of emptying and filling the action is mainly anaerobic in beds receiving crude sewage by reason of the large amount of organic matter in suspension left to be acted upon and the limited amount of oxygen available, though some nitrification takes place. The most troublesome difficulty with this process is the silting up or choking of the beds. Many beds have had to be renewed, and the septic tank is taking the place of such beds.

The undissolved organic matter having been taken out of the sewage, except very finely divided matter, purification of the dissolved organic matter is the next step. The removal of the suspended matters simplifies the work, making it much more nearly comparable to water purification. The work to be done is nitrifying and oxidizing, and the principal processes are all aerobic and re-

quire the presence of air in sufficient quantities. Intermittent downward filtration, already referred to makes an efficient method. At least five times as much septic tank effluent may be treated on a given area as crude sewage, and the area required is very much reduced. The beds must be constructed and operated so as to be at all times thoroughly aerated. The principal other aerobic processes are the contact bed and the continuous filter.

Contact beds are beds formed of coke, screened gravel, finely broken slag or stone, cinder, etc. The bed is slowly filled with sewage, then allowed to remain in contact with the grains of the bed and the bacterial growth surrounding them for a certain period, say two hours, and then is allowed to drain out slowly, after which a period of rest is allowed. Generally automatic contrivances are utilized for shifting the flow from one tank to another of a series in order to provide for the periods of contact and of rest. The discharge of the beds causes the voids to fill with air thus enforcing aeration. The depth of bed is from 3 to 6 feet. Since the bed is entirely filled there is not the difficulty of proper distribution as in intermittent downward filtration. Sometimes the effluent from the first bed is applied to a second, when the term "double contact bed" is used. With a depth of 4 feet and 33 $\frac{1}{3}$ % voids, and four applications or doses per acre per day, the single contact bed will take 1,500,000 gallons per day. The more usual operation is three doses per day. The filling material usually ranges from $\frac{1}{8}$ inch to 1 inch in size. It is seen that the process is in no sense a screening or mere mechanical process.

A single contact removes from septic effluent or settled sewage about 60 to 65% of the organic matter as shown by the albuminoid ammonia, and a second contact removes 50 to 60% of the remainder, making an efficiency of 90 to 95% for the whole process from the crude sewage. The second contact is almost wholly oxidizing and nitrifying in its action.

As an example of the use of the contact bed, the case of Manchester, England, may be cited. Tanks to care for 15,000,000 gal-

lons of sewage per day have been erected to treat the effluent from the septic tanks which have taken the place of the chemical precipitation process.

The real difficulty with the contact beds will be to maintain capacity. To obviate loss of capacity, it is necessary to construct the beds of material which will not break up and thoroughly to take out suspended matter before the sewage is applied to the contact beds. Some plan for occasionally washing out the undigested matters with the effluent may be devised, removing these by further subsidence.

Another very efficient method is the continuous filter. This filter is built in very open form and the sewage is applied by sprinkling it in drops like rain, or in jets or thin streams, over the surface of the bed so that the surface is continuously damp. It differs from intermittent downward filters in that neither the whole bed nor the surface layer is ever saturated with sewage, the liquid passing in drops or thin streams through the bed while air is allowed to circulate freely through the interstices. Of course individual filters are allowed to rest occasionally. The beds are usually made of coke, the pieces varying in smallest dimensions from 2 to 4 inches, and the resulting interstices between the material being correspondingly large. Various devices are used to make the distribution, revolving reaction wheel, tipping troughs, jets from pipes, etc.

Running a filter continuously and supplying fresh air as is the case with the continuous filter, permits a very high rate of operation. These filters are run successfully at a rate of two to three million gallons per acre per day, giving a purification of 83% from the septic effluent used and making a total purification of 92% in the two processes. The continuous filter is receiving much attention in England, and while it may be said to be still in the experimental stage it is one of the most promising of the aerobic processes.

In this discussion nothing has been said of the effect of these processes on pathogenic bacteria, and in fact not very much is known. It is known that high bacterial action is detrimental to the development of pathogenic

bacteria, and it seems probable that their numbers are very much decreased by these processes. The typhoid bacillus has been found to diminish rapidly in a septic tank, and single contact beds remove 90% of them. It is held that these processes, especially at the temperatures of the sewage, are detrimental to the survival of such organisms. It must be said that the English Boards have usually required a final land treatment in addition to the new processes. Of course, for water supplies from streams receiving effluents from sewage purification plants, it goes without saying that there should be a thorough and systematic filtration of the supply. It should be distinctly stated, however, that for most of our prairie streams it would be folly to require a sewage effluent which would come up to drinking water standards and that an effluent free from unstable compounds and giving unobjectionable flow is all that is wanted. The cause of clean streams has been injured by advocates of impracticable requirements.

In the choice of a process and the making of a design many engineering features enter. Local conditions may result to the advantage of one process. Methods which involve large operating expenses should be avoided. Many laboratory methods are not acceptable; the purification of vast quantities of sewage without cessation is a large undertaking. Pumping and lifting of sewage should be avoided if possible, and labor and attendance must be reduced to a minimum. But in the end, it must be understood that the operation of a purification plant requires intelligent supervision and that it must not be neglected.

Summarizing then the value and applicability of the various processes for the conditions of the ordinary Illinois inland town, it may be said that

1. The septic tank is a simple and efficient means of taking care of the undissolved organic solids of sewage, and this process prepares the sewage so that the completion of purification is more easily accomplished.

2. Septic tank effluent may be discharged into streams where the discharge of crude sewage would be very objectionable.

3. The effluent of the septic tank may be satisfactorily treated by (a) some form of

by the contact bed, and (c) by the continuous filter, and the choice of methods is largely an engineering question.

rapid intermittent downward filtration, (b)

Standards of excellence in sanitary matters are yearly being pushed upward. Physicians have had a large share in making new opinions. Personally, I expect that they will greatly aid in making a sentiment which will put sewage disposal in inland towns upon a plane in keeping with the highest sanitary ideals.

Discussion.

Dr. Johnson: Mr. President, I will have to apologize, for I have not prepared myself to open this discussion, but I happen to be a fellow-townsmen of Prof. Talbot, and I was there when the sewer system was put in, and I know it to be very satisfactory. The same can be said of the sewer system of Champaign, which is the sister city of Urbana, and I know that Champaign and Urbana have become a sort of sanitary Mecca. People have come from all over the country, the Eastern states and Canada, to investigate our sewer system and they have gone away pleased, and in not a few instances, have put in similar systems, and I understand they have given satisfaction.

Sanger Brown: I regret that I was not here at the opening of the paper. It is a subject in which I suppose we are all very much interested. It is one to which I at one time, paid considerable attention. I will say that I think generally it is a subject that physicians do not pay as much attention to as it deserves, the matter being left, like the subject of ventilation, to architects or people who really do not feel very much interested in it. I would like to have heard, though I suppose the doctor had to limit his paper somewhat on account of time—I would like to have heard of the practical method of disposal of sewerage which would be suitable to a large residence or sanitarium, say, where 50 or 60 or 75 people were to be lodged, and as the doctor has evidently made this a subject of careful research of late, I would like to hear him discuss the feasibility or the desirability of discharging this sewerage into a system of porous tiling distributed throughout several acres, the ground having been underdrained with other porous tiling at a lower level, and whether or not he thinks it would be feasible to discharge carefully strained sewerage into such a system indefinitely, there being only a comparatively slight pitch to the ground, but the soil being sandy—whether it could be disposed of indefinitely and practically by that method, that is, without being previously treated and the closed tanks that he has so well described, or if it could be successfully disposed of in that way after such treatment.

The Chairman then called up Prof. Talbot to close the discussion of his paper.

Dr. Talbot: Replying to the question, I will say that the disposal of sewerage for private residences and institutions is much the same as that for cities, and the same principles will apply with the one difference of the matter of attendance. The process which was asked about has been used and it is practicable but depends largely upon the soil. Merely screening out the solids is not very successful. If they could be all properly screened out, the working of the sub-irrigation system—the name applied to the discharge into tile below the surface of the ground—would be all right for light, sandy soil. However, as ordinarily operated, undissolved solids would get by the screens and that part of it would be quite objectionable and would eventually clog the system. Putting in an aseptic tank would considerably aid in reducing the defects, but even then it is probable that a system somewhat allied to that and having distribution made directly under the surface by filling round about the tile with broken stone or coarsely screened gravel would be much better. If the soil is sandy and a tank such as described were put in, the method would be practicable and successful.

SUCCESSFUL REMOVAL OF A CYSTIC FIBRO-MYOMA OF THE UTERUS, WEIGHING 87 POUNDS.*

BY J. CLARENCE WEBSTER, M. D.

Professor of Obstetrics and Gynecology in Rush Medical College, affiliated with the University of Chicago.

Mrs. L., married, aged 41, was admitted to my service in the Presbyterian hospital, Chicago, December 10, 1902, complaining of great enlargement of the abdomen, a feeling of discomfort, inability to walk with ease, occasional shortness of breath.

History of disease. About 10 years previously a small lump, the size of a hen's egg was noticed in the left iliac region. Seven years ago an examination was made and a tumor of the womb was found as large as a fetal head. An attempt was made to ligate the uterine arteries by the vaginal route, and her physician stated that this had been successful. No diminution in the size of the tumor followed, but, rather, a gradual increase. Until 4 or 5 years ago, the mass was tender, but not since. After menstrual periods she has frequently observed some diminution in the size of the swelling and some relief as regards her discomfort. She is short of breath much of the time. She has not been confined to bed, but has not been able to walk much and has spent

most of her time during the day in an easy chair or sofa. There has been no appreciable change in her general nutrition.

Menstrual and Sexual history. Menstruation began at 14, regular 28 day type, 3 or 4 days duration. For many years the flow was moderate; recently it has been profuse. There has never been any dysmenorrhoea. Since the tumor was noticed she has always felt better during menstruation than at other times. She has never been pregnant.

Other illnesses. As a child she had some lung trouble; also scarlet fever and diphtheria. She lived in the south eleven years and suffered from diarrhoea. During much of that period her skin was jaundiced and pigmented.

Physical examination. She is of medium size, poorly nourished. The thyroid is moderately and uniformly enlarged.

Chest. The heart is displaced slightly upwards and to the left. Sounds normal. The lower part of the thorax is bulged somewhat outwards by the abdominal swelling. The abdomen is enormously distended in a uniform manner, and is pendulous. The veins are somewhat prominent in the parietes.

The navel is stretched and bulged forward as distinct local protusion 2 inches in transverse diameter.

MEASUREMENTS.

From tip of ensiform to symphysis pubis 91 c. m. (35¾ inches).

From tip of ensiform to umbilicus 49 c. m. (19¼ inches).

Greatest girth of the abdomen 152 c. m. (5 feet).

Chest circumference at xyphoid 79 c. m. (31½ inches).

Chest circumference over mammae 80 c. m. (31½ inches).

Chest circumference under arms 71 c. m. (28 inches).

From one anterior superior iliac spine to the other in front 95 c. m. (37½ inches).

The lowest portion of the pendulous abdomen is 28 c. m. (11 inches), below the level of the anterior superior iliac spines.

The urine was normal except for the presence of a few hyaline and granular casts. These disappeared shortly after her admis-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

sion to hospital. The quantity of urine in 24 hours varied from 1500 to 1850 c. c. The blood analysis gave 3,728,000 erythrocytes per cu. mm, 13,200 leucocytes, and 55 per cent hemoglobin; temperature and pulse normal. The patient was kept in bed, iron, strychnine and diuretics being administered, and the diet carefully regulated.

Operation, December 16th. I was assisted by Drs. Farnum and Barnhardi, Dr. Wahrer attending to the anesthesia. The skin was infiltrated with Schleich's mixture for a length of 5 inches below the umbilicus. The peritoneal cavity was then opened along this area and the anterior surface of the tumor examined. Adhesions were present over its lower portion, but they were easily divided. The upper portion of the tumor was occupied by a large cyst. This was tapped and a large quantity of straw-colored serous fluid removed. Several smaller cysts were similarly treated; in some of these, the fluid contained blood. The abdominal incision was then extended above and below until it measured about 12 inches, no further anesthesia being employed. This caused the patient slight discomfort. The entire tumor was then lifted out of the abdomen, the cavity being filled with gauze sponges soaked in hot normal salt solution. The peritoneal cavity contained some free serous fluid. The ovaries and tubes were enormously hypertrophied and were covered with many adhesions. The uterine and ovarian vessels were greatly enlarged. The round ligaments were ligated and divided, then the ovarian vessels and finally the uterine vessels. The normal relationships were considerably altered and many adhesions were present to the rectum and other pelvis structures.

The patient complained of some pain when the latter were divided, when the needle was introduced into the tissues and when the catgut ligatures were tied. After I had worked for an hour, the patient began to get somewhat restless, and I ordered a few drops of chloroform to be sprinkled on the inhaler. These were repeated from time to time, but the quantity was not sufficient to produce loss of consciousness. The entire uterus and appendages were removed, the vagina closed

and all raw surfaces carefully covered with peritoncum. The recti and other abdominal muscles were noticed to form thickened elongated masses lying along the iliac fossae. The whole anterior portion of the abdominal wall consisted only of skin, stretched fascial structures and peritoneum. A large portion of the wall was removed on each side of the incision, but no attempt was made to bring the muscles towards the middle line, on account of the length of time occupied in the removal of the tumor.

Several pints of hot normal saline solution were placed in the abdomen before the incision was closed.

The operation lasted 2½ hours. During the first hour no anesthetic was used, except the Schleich mixture in the skin. During the remaining 1½ hour only 24 grms. dr. 6 of chloroform were employed. After the operation, the patient's pulse was 74. She made a normal recovery. Six days after the operation she weighed 91 pounds. Shortly before leaving the hospital on January 14, 1903, she weighed 101 pounds.

The nature of the Tumor. The tumor was a multilocular cystic fibroid uterus. The Fallopian tubes were greatly elongated. The ovaries were greatly enlarged. One was flattened and somewhat crescentic in shape, measuring 18 c. m. in length, 4 c. m. in breadth, and 5 c. m. in thickness. The other was ovoid, about as large as a goose-egg and cystic.

The entire tumor and its fluid contents weighed 87 pounds. Its weight was, therefore, just about that of the rest of the patient at the time of the operation.

Remarks. The case is of interest chiefly because of the successful recovery after the removal of a very large uterine fibroid tumor. The occurrence of such a large uterine growth is very rare, successful removal much rarer. In the whole of literature I have not found reports of a dozen cases in which the tumor weighed more than 75 pounds.

Platonoff described a solid fibroid of 90 pounds.

McIntyre described a solid fibroid of 106 pounds.

Stockard described a cystic fibroid of 135 pounds.

Hunter described a cystic fibroid of 140 pounds.

Severanu described a cystic fibroid of 195 pounds.

In almost every case in which hysterectomy was carried out death occurred.

I attribute my success in this case to the careful preparation of the patient prior to the operation, to the heat applied to her body during the operation by means of an electric pad, to the slight loss of blood, and to the small quantity of anesthetic administered. The abdomen was opened for a distance of 12 inches, the tumor was aspirated in various places, was then lifted out of the abdomen by two assistants, many adhesions being separated, the ovarian and uterine vessels were ligated and the broad and round ligaments were divided, all prior to the administration of a general anesthetic. Verbal suggestion and encouragement were constantly employed during this period, in order to quiet the patient. During the rest of the operation only a few drops of chloroform were used from time to time—in all 6 drachms. This sufficed to keep her very quiet though no reflexes were abolished. During the last year I have frequently adopted this procedure in abdominal operations in cases in which the patient's condition did not warrant the administration of a general anesthetic in any quantity. After using the Schleieh mixture in the skin I have entered the peritoneal cavity and have worked as long as possible without the use of any anesthetic. I have found great variations as regards the endurance of patients. Only occasionally, however, have I been forced by the nervousness or struggling of the patient to anesthetize her immediately on entering the abdomen. By such a method of operating, though there is some mental and physical distress to the patient, there is a diminution in the risk to her life, and in addition she is ensured considerable or complete freedom from the disturbances which ordinarily accompany the post-operative state.

The value of the electric pad to supply

heat to the patient's body in such cases I cannot too strongly emphasize. The free use of hot normal saline solution in the abdominal cavity before closure is also highly recommended by me.

MINUTES OF THE FIFTY-THIRD ANNUAL MEETING.

OF THE ILLINOIS STATE MEDICAL SOCIETY,
HELD IN CHICAGO, APRIL 29 AND 30,
AND MAY 1 AND 2, 1903.

April 29, 1903—First General Meeting.

The Society convened in the Tremont Hall at 9:15 A. M., and was called to order by the President, Dr. M. L. Harris, of Chicago.

Dr. James H. Stowell, Chairman of the Committee of Arrangements, made a brief report. He called attention to the clinics to be given in the afternoons at the various hospitals, to the scientific program, and to the entertainments, after which the general meeting adjourned, and the sections were called to order.

MINUTES OF THE HOUSE OF DELEGATES OF THE ILLINOIS STATE MEDICAL SOCIETY.

April 29, 1903—First Session.

The house of Delegates was called to order at 2:15 P. M., Wednesday, April 29th, in Tremont Hall, by the President, Dr. M. L. Harris, of Chicago.

The Secretary called the roll of Delegates, and there were 53 present.

The President delivered a brief address:

Your president in calling this assembly to order wishes to congratulate you all as members of the first House of Delegates of the Illinois State Medical Society.

While enjoying this distinction, however, you should not be unmindful of the duties you assume, and of the work which lies before you.

The profession throughout the country is entering upon a new era of enlarged usefulness to the community in general as well as to the profession itself, and it becomes you as the representatives of the medical profession of the State of Illinois to see that Illi-

nois maintains her rightful position at the front.

It is unnecessary for me to dwell at length on the re-organization of the profession which is so rapidly extending throughout the land, and with which you are all more or less familiar. Suffice it to say that the progress made is almost beyond the expectations of the most ardent advocate, and the numerous questions that are constantly coming up for consideration requires the most mature deliberation, that the foundation may be solid and the structure raised, enduring.

It is but a year since we adopted a new constitution, a constitution on which able minds spent many hours of earnest labor; a constitution which was far in advance of anything we ever had before. Yet notwithstanding all this care and labor, the constitution had scarcely been adopted, when it became evident that many changes in it were necessary, changes, too, of a fundamental character. This is not intended as a reflection in the slightest degree on the founders of our present constitution, but simply as an illustration of the rapid progress which reorganization has made during the past year. It is scarcely to be expected that an organization of this kind, meeting but once a year for two or three days, and then principally for scientific purposes, could perfect at once such an important document as a constitution, and particularly during such a formative stage as at present exists.

In presenting therefore for your first consideration and adoption certain changes in the constitution and by-laws, your president does so only after mature deliberation and the advice and counsel of his associates in the work have convinced him that they are essential for the attainment of that degree of organization for which we strive. It should be remembered that we, as a State, are but one of some forty odd, all of which are striving for the same end. How very important it is, therefore, that uniformity of action should prevail throughout the States; but uniformity of action can only prevail when that action is guided by uniform principles.

The principles underlying the proposed changes in our Constitution have already been adopted by twelve or fourteen of the

States, and many others are rapidly taking them up, so that it is safe to predict that the constitutions throughout all of the State Medical Societies will soon be on a uniform basis.

It is not claimed that these proposed changes are perfect in all their details, but the principles underlying them are what we particularly desire, and they are such as permit of elaboration as experience may dictate. You are therefore respectfully urged to give these proposed changes your first consideration, in order that we may proceed to work under them at the earliest possible moment.

Should these changes meet with your approval and be adopted, there are many important matters of business to come before you.

The amount of the per capita assessment to be levied; the disposition of the funds; the question of the defense of members in malpractice suits, and other impositions; the publication of a State medical directory; the State Medical Journal; the election of officers, etc.

As many of the questions involved are purely business matters, and as the work devolves largely upon the officers elected by you, it behooves you to select for the offices not only men of good business ability, but men who are willing to give the time which the importance of the work demands.

In the present state of reorganization and the amount of work to be done by these offices should not be considered simply as positions of honor, but as positions of work as well.

Our Journal may be either a burden and tax on the Society, or a source of income and a great help to the profession, according to the amount of business principle with which it is managed. This is a most important matter, and your president believes, if the right individual could be found, that it would be a wise act to combine the secretaryship of the Society and the Editorship of the Journal.

Feeling certain that these questions will receive your earnest consideration, the first House of Delegates of the Illinois State Medical Society is now declared to be in session and ready for business.

At the conclusion of the delivery of the address, Dr. R. R. Campbell moved that the recommendation embodied in the suggestions contained in the President's address to the Committee on Constitution and By-Laws be adopted. Seconded.

After some discussion by Drs. Will, McAnally and Pettit, the President stated that a vote would not be taken until after the constitution and by-laws had been read.

It was then moved, seconded and carried that the constitution and by-laws be read article by article.

The secretary then did so, as directed, and after discussion and amendments, the constitution and by-laws were adopted as amended.

It was moved that the new constitution and by-laws go at once into effect, except in so far as pertained to the reports of officers and of standing committees for this year. Carried.

On motion of Dr. Wm. A. Evans, Professor J. von Mikulicz, of Breslau, was made an invited guest of the Society for this meeting.

On motion of Dr. C. B. Johnson, Dr. F. W. Prentice, of Oregon, was made a member by invitation, and invited to participate in the proceedings.

Dr. O. B. Will presented a resolution in regard to the indisposition of Dr. Robert Boal, and his regret at being unable to attend the meeting.

On motion of Dr. Ensign, Dr. Will was instructed to present the resolution to the general meeting of the Society in the evening.

On motion, the House of Delegates then adjourned, until Thursday afternoon.

April 29, 1903—Second General Meeting.

The Society reassembled at 8:30 P. M., and was called to order by Dr. Wm. A. Evans, of Chicago.

In the absence of Hon. Carter H. Harrison, who was to have delivered an address of welcome on behalf of the City of Chicago, the address was delivered by Dr. Taylor, the Prosecuting Attorney of the city.

ADDRESS OF WELCOME ON BEHALF OF THE CITY OF CHICAGO, BY DR. TAYLOR, PROSECUTING ATTORNEY OF THE CITY.

Mr. President and Members of the Illinois State Medical Society.—I regret quite as keenly as any of you can the fact that His Honor, the Mayor, is not present tonight in person to extend to this Society the courtesies which its character entitles it to receive. Just now the Illinois Legislature has an attraction for the Mayor. (Laughter.) I will give you a diagram if you require it. He has gone to Springfield to argue an old thesis of his, namely, that the streets of Chicago belong to Chicago, and that they are worth just as much to the municipality as they are to anyone else, and the duty of arguing such a proposition seems to him so imminent and eminent that he has had to deny himself the pleasure of meeting this honorable and distinguished body, but he wrote me a letter asking me, as a member of his official family, to be present on this occasion, and, if the ladies and gentlemen of the Society would tolerate me, to bid you, in his name, and for the people of Chicago, a most hearty welcome.

This great city of ours, twenty miles long, eight miles wide, and in spots from sixteen to twenty-two stories high must be interesting to almost anybody and any kind of a mind. I take it that it would be interesting to ladies and gentlemen who are students of sanitation, therapeutics, and kindred branches. For instance, when you come to reflect that Chicago is built upon from sixty to one hundred feet of blue mud; that it was built so rapidly and has extended its borders with such amazing celerity that our factories, rendering establishments and slaughtering houses are mixed up with our residences—when you know these facts and ascertain the further fact that Chicago, according to vital statistics, is absolutely the healthiest great city in the world, you will then occupy your minds in trying to account for it, and perhaps some will ascribe it to the scientific attainments of our local physicians and surgeons, or else to the partiality of an inscrutable Providence.

You will discover another thing if you re-

flect upon the situation, that, while Chicago has been builded so rapidly, that it has not been able to finish its streets or to get rid of the dirt, that while it has expended its revenues so rapidly that it is constantly on the eve of momentary bankruptcy nevertheless Chicago has undertaken and put through, with her magnificent maxim, "I will," absolutely the greatest sanitary exploit in all human history, and we are sending our Lake water, and other incidental bi-products all the way down to St. Louis. (Laughter.)

I wish you to reflect also upon this fact that we have the greatest variety of medical science in this city that probably can be presented anywhere upon the habitable globe. We have the goat lymph therapy, the bare foot therapy, the grape cure, raw food cure, and establishments of every variety and method of healing by different kinds of suggestion, Christian and otherwise, so effectually that it only requires occasionally to be helped out clandestinely with some powders and pills to make it perfectly satisfactory to everybody. We have here one of the ancient prophets reincarnated, standing ready to lay his hands upon any sick man and relieve him of anything he has. (Laughter and applause.)

We welcome you, ladies and gentlemen, to an investigation of all these phenomena. We welcome all modern discoveries, and the most recent achievements in the investigation of biology, for I want all of you to remember that out on the Midway, where a few years ago we were entertained by Asiatic songs and dances, it has recently been discovered that common salt is the elixir of life, so that we are compelled logically to believe that Lot's wife must still be alive somewhere. (Laughter.) Still more recently they have discovered the old problem of how to square a circle, to manufacture life by electricity, and if you will only allow the Midway to have sufficient elbow room and time, I have no doubt that there are other volumes of wisdom to be unrolled for your investigation. (Laughter.)

But now, seriously, let me add, and this is my closing eulogy upon Chicago, for you have already discovered that is my chief function here, that Chicago is not a mere

packing town. While we have done more of that than anybody else in the world, while the material part of Chicago is a phenomenon of commerce, yet, ladies and gentlemen, it is true that in all of the embellishments and substantial attainments of intellect, Chicago stands behind none, and the great universities which you will visit, our museums, our art galleries, our schools of technology, our parks and boulevards, will compare favorably with the old metropolises of Europe that have been centuries in building.

I must not detain you longer, and I am almost ready to apologize for having spoken at such length. I wish to conclude my remarks by saying to your worthy President and the officers of this Society that we have here a cosmopolitan, polyglot population, in that forty-three different languages are spoken in this town. If I had a synonym for the word welcome I would say it in forty-three languages. In plain English, then, I welcome you to Chicago. (Applause.)

Hon. Henry G. Foreman, President of the Cook County Commissioners, delivered an address of welcome on behalf of Cook County. Mr. President and Ladies and Gentlemen:

I am very glad indeed tonight to welcome to Cook County the representatives of the largest state medical society in the world. We are used to large things here. We do things on a large scale in Cook County. So it is pleasant to give the freedom of our part of Illinois to a society that is big.

I am told that you have 4315 members, 1415 in Cook County, and that there are 70 county societies among the 83 bodies that make up your state organization. It is pleasant to think in the aggregate of 4315 doctors uniting for progress in the humane work of the physician and surgeon.

I feel honored, on behalf of Cook County, to welcome you here. Our Board of Commissioners is well acquainted with your profession. It is one of our duties to care for the sick and injured poor. We are interested in doctors.

Our County Agent has 10 physicians employed the year around in giving free treatment to the sick poor at their places of residence.

Our County Hospital has 955 beds for the sick and injured poor, and 202 attending and associate physicians and surgeons, 39 internes and from 111 to 121 nurses to care for these unfortunates.

At Dunning, just northwest of Chicago, we care for chronic pauper cases in the infirmary, for the demented at the Hospital for the Insane, and for consumptives at the Hospital for persons ill with the great white plague. The population at Dunning at present is about 3,000. We are soon to provide accommodations for 600 more. A staff of nine doctors, 34 nurses and 113 attendants is employed there.

So you see we are used to big things in your line; and I want to say right here that we appreciate the services of the medical men who give their time without charge to the care of the sick and injured at our hospital.

In extending a word of welcome to Cook County, let me state that the doors of our institutions are open to you and that we shall be glad to have you inspect any or all of them during your stay here.

Ladies and Gentlemen, you are cordially welcome to Cook County.

Mr. Foreman was followed by Dr. J. H. Stowell, of Chicago, who delivered a brief address of welcome on behalf of the Chicago Medical Society.

Mr. President, Ladies and Gentlemen. It is with great pleasure I welcome you to this city, on behalf of the medical profession of Chicago, and to the enjoyment of the many privileges that are here for you. We ask that you make yourselves at home, find all you can; search everywhere, and what you fail to find, come and ask us for it and we will give it to you. We most cordially welcome you to this city, the greatest medical center, yea, the greatest educational center in the world. (Applause.)

The response to these addresses of welcome on behalf of the Illinois State Medical Society, was made by the President, Dr. M. L. Harris, after which Dr. Harris delivered his address as President of the Society.

RESPONSE TO THE ADDRESSES OF WELCOME BY
PRESIDENT HARRIS.

Ladies and Gentlemen. Among the many duties that devolve upon the President of

this Society, none is more pleasant than to accept, on behalf of this Society, the kind words of welcome which we have just heard. We have more to be grateful for than I had anticipated. We have not only been welcomed to the city, but we have listened to a most remarkable dissertation by Dr. Taylor about hygiene, State medicine, biology and physiology—a treat which I am sure none of us anticipated, and I have to thank him for his words of welcome, for his very learned remarks in that direction, because I am sure, as physicians, we all appreciate them.

Thanking the gentlemen, then, for their cordial addresses of welcome, on behalf of the Society, I will now proceed to deliver the President's address.

(See page 1, Vol. V.)

Dr. John A. Wesener, of Chicago, was introduced, and delivered the address of Section Three. He selected for his subject, "Foods."

(See page 4, Vol. V.)

Prof. J. von Mikulicz, of Breslau, was introduced, and thanked the Society for the warm reception accorded him.

At the conclusion of the address of Dr. Wesener, Dr. O. B. Will presented a resolution in regard to Dr. Robert Boal.

Whereas, as might naturally be anticipated from our knowledge of the character of the man, information has just reached us that that veteran physician, Dr. Robert Boal, of Laron, now in his 97th year; patriot, scholar and statesman; one time friend and counsellor of Abraham Lincoln; one of the two surviving founders and an ex-president of the Illinois State Medical Society, has sent an expression of keen disappointment at his physical inability to be once more with us on this occasion of our Society's fifty-third annual meeting; therefore, be it

Resolved, That the members of this Society, in general session assembled, through their Secretary express to Dr. Boal their congratulations on his phenomenal record of years in a well-spent life, and at the same time convey to him their mingled feelings of sympathy and good cheer in the hour of his naturally advancing infirmity.

Resolved, also, that we likewise extend to that Nestor of the profession, and instigator

of organization; that one who has ever been deeply interested in the welfare of our profession, and done an immense share of the work necessary to its growth and advancement; that one whose familiar face adorns the memorial medal which we are proud to wear on this occasion; that we extend Dr. N. S. Davis, Sen. (of not only Chicago and Illinois, but of the United States) our hearty congratulations on his ability to be with us, and express to him our earnest hope that years and comfort may yet be his in abundance.

On motion of Dr. Frank Billings, the resolution was adopted unanimously by a rising vote.

After some announcements by Dr. Stowell, Chairman of the Committee of Arrangements, the Society adjourned.

HOUSE OF DELEGATES.

April 30, 1903.—Second Session.

The House was called to order at 2:30 P. M., by President Harris.

Thirty-four Delegates responded to the call of the roll.

The President stated that the report of the Executive Committee was embodied in the report of the Secretary.

The Secretary then presented his report.

SECRETARY'S REPORT.

To the President and House of Delegates of the Illinois State Medical Society:—

Your Secretary is pleased to report that the Illinois State Medical Society is now an incorporated body under the laws of the State of Illinois and submits herewith the charter issued by the Secretary of State.

At the last meeting of the Illinois State Medical Society at Quincy the House of Delegates elected eight delegates and eight alternates to the American Medical Association with instructions to the secretary that after consultation with the officers of the American Medical Association that if we were entitled to eight, credentials should be issued, but if we were entitled to three that credentials should be issued to those three. After such consultation your secretary issued credentials to J. T. McAnally of Carbondale, F. X. Walls, Chicago and O. B. Will, Peoria. The name of O. B. Will was substituted for

that of H. P. Beirne of Quincy as he, Beirne, was not at that time a member of the American Medical Association and therefore not eligible. McAnally's and Wall's credentials were made out for two years and O. B. Will's for one year. As your president will, however report, he was able to seat eight delegates at the Saratoga meeting of the A. M. A.

Shortly after the last meeting your secretary prepared blanks for affiliation which he sent to all of the county and district societies of the State. Upon receipt of the same properly signed by the president and secretary of each society, they were transmitted to the Judicial Council for consideration. The Judicial Council approved the following societies:

Adams County.
Alexander County.
Bond County.
Bureau County.
Cass County.
Calhoun County.
Chicago Medical Society for Cook County.
Carroll County.
Champaign County.
Clay County.
DeWitt County.
DeKalb County.
Deeatur Medical Society for Macon Co.
Douglas County.
Edwards County.
Fayette County.
Fox River Valley Medical Society for Kane County.
Fulton County.
Gallatin County.
Greene County.
Grundy County.
Hancock County.
Henderson County.
Henry County.
Jersey County.
Jackson County.
JoDaviess County.
Johnson County.
Kankakee County.
Kendall County.
Knox County.
LaSalle County.
Lake County.

Livingston County.
 Macoupin County.
 Massac County.
 Marion County.
 Marshall County.
 Mercer County.
 McDonough County.
 McLean County.
 Montgomery County.
 Morgan County.
 Ogle County.
 Peoria City Medical Society for Peoria
 County.
 Pike County.
 Perry County.
 Pope County.
 Pulaski County.
 Richland County.
 Sangamon County.
 Scott County.
 Stephenson County.
 Schuyler County.
 Stark County.
 St. Clair County.
 Tazewell County.
 Union County.
 Vermilion County.
 Warren County.
 Winnebago County.
 Will County.
 Williamson County.
 White County.
 Wabash County.
 Whiteside County.

DISTRICT SOCIETIES.

Aesculapian Society of Wabash Valley.
 District Medical Society of Central Illi-
 nois.
 Galva District Medical Society.
 Military Tract Medical Association.
 North Central Illinois District Medical
 Society.

Southern Illinois District Medical Society.
 Western Illinois District Medical Society.
 To all of the above were issued certifi-
 cates of affiliation as per Constitution.

The Council approved the application of
 the Brainerd District Medical Society. Af-
 ter the Council had reported its approval, it
 was learned that this Society had contracted
 its territory by excluding some counties
 which brought it under the constitutional

prohibition. Your secretary refused to issue
 said certificate and reported the same to the
 Judicial Council.

The Tri-County Medical Society consist-
 ing of Iroquois, Ford and Vermilion counties
 was not approved for the same condition,
 and it was suggested that Iroquois and Ford
 counties form a County Society, as Vermilion
 County has one.

The Fox River Valley Medical Society
 made application for affiliation and to be
 recognized as the official society for Kane
 County. The Judicial Council approved
 the same and a charter was issued accord-
 ingly. It seems, however, that there is con-
 siderable dissatisfaction that the original
 territory of the Fox River Valley Medical
 Society was not included and that it was not
 recognized as a district society. There
 seems to be some misunderstanding some-
 where and the matter should be adjusted to
 the satisfaction of all parties concerned.

Agreeable to instructions of the Executive
 Committee and other members of the So-
 ciety at a meeting held in Chicago in Jan-
 uary, your secretary issued a circular letter
 signed by the President and myself to every
 county and district society in the State for
 the purpose of requesting each society at
 its following meeting to adopt an assess-
 ment per capita plan of \$2.00 each mem-
 ber. After a tremendous amount of cor-
 respondence concerning the same the ques-
 tion was considered by a large number of
 the societies, but I have only been notified
 that the following have voted in the affirm-
 ative: Calhoun County, Edwards County,
 Gallatin County, Grundy County, JoDaviess
 County, McLean County, Rock Island
 County, Union County, Vermilion County,
 Warren County, Winnebago County, White-
 side County, Peoria City Medical Society
 for Peoria County, Cass County, Decatur
 City Medical Society for Macon County,
 Bureau County, Jersey County, LaSalle
 County, Macoupin County, McDonough
 County, Ogle County, Pike County, Sang-
 aman County, St. Clair County, Brainerd
 District Medical Society, Jackson County,
 Henry County, Marion County, Scott
 County, Stephenson County, Kankakee
 County, Chicago Medical Society, The Med-

ical Society of Cook County, Fayette County.

The Fulton County Medical Society postponed action.

The Greene County Medical Society did the same.

The Marshall County Medical Society has not had a meeting.

I caused to be printed two thousand programs, a copy of which was sent to every member of the Society and one to the secretary of every State Society.

I herewith transmit for your consideration the Kyger Resolutions with the following resolution by the Judicial Council attached:

"Resolved, That after due consideration we recommend the Kyger resolutions for the abolition of the newspaper publications of personal advertisements to the State Society and that we recommend its adoption. Be it further

Resolved, That we recommend to the Illinois State Medical Society that a permanent committee be appointed by the President of the State Society to investigate the whole question of the prevention of conception and the production of criminal abortion."

I wish to present for your consideration the condition of medical organization in the State and in order to make it as comprehensive as possible. I submit herewith three maps in colors which will indicate that condition. In the first you will see that every county has an independent organization except the counties of Boone, McHenry, DuPage, Putnam, Iroquois, Ford, Mason, Brown, Menard, Piatt, Moultrie, Coles, Clark, Effingham, Jasper, Lawrence, Clinton, Jefferson and Wayne, total twenty counties. The second will show you the counties in affiliation with the State Society, all of which are in affiliation except thirty-seven. Edgar, Lee and Shelby counties are in process of affiliation. The next will show you the various district societies. The map will indicate at a glance how the various district societies overlap each other and where, as for instance Galva is entirely within the district of the Military Tract, the North Central Illinois overlaps the Military Tract in Marshall County, the Military Tract overlaps the Western Illinois

in Pike County, the Tri-County overlaps the Aesculapian in Vermilion County, the Central Illinois overlaps the Brainerd, Western Illinois, Aesculapian and Southern Illinois, the Southern Illinois overlaps the Aesculapian in Richland and Lawrence Counties. A comparative study of the three maps will show that there are only three counties in the State that have no representation either in district or county societies, namely, Boone, McHenry and DuPage. There are at present quite a number of members of the Fox River Valley who reside in McHenry County.

J. A. Egan resigned his membership of the Committee on Medical Legislation. It was accepted by the President and he appointed J. T. McAnally to the vacancy.

The resignation of W. F. Grinstead, member of the Committee on Medical Societies was accepted by the President. J. W. Pettit was appointed to fill the vacancy.

Respectfully submitted,

Edmund W. Weis,

Secretary.

On motion of Dr. Ensign, the report was accepted. The next thing in order was the report of the Committee on Publication, which was read by Dr. Geo. N. Kreider, of Springfield.

EDITOR'S REPORT.

Springfield, Ill., April 25, 1903.

To the President and members of the Illinois State Medical Society:

Sirs: I herewith submit my report as editor of the Journal of this Society which with the May issue completed its fourth volume. The Journal, established at the Cairo meeting in 1899, has had a steady growth and increasing influence and I believe it is now universally conceded that the Journal is a vast improvement on the previously issued annual volume of transactions. The increasing number of Journals and Reviews making abstracts and quotations from the columns of the Journal shows that the productions read before the State and local societies of Illinois are no longer buried in a stately volume, but go out in the general current of the profession to the benefit of these societies, the readers and the individual members of the profession.

Owing to the anticipated change in the constitution which has been consummated at this meeting by which each member of a local society pays dues through his secretary and thereby obtains the Journal, there has been no active canvas of the state for the purpose of increasing our subscription list. Notwithstanding this fact it is gratifying to be able to state that not less than one hundred and fifty names have been added to that list during the year. The greater part of them came in on their own motion or by reason of the efforts of the officers of local societies to whom an expression of thanks should be given. The average number of Journals issued each month has been 1,900. In the volume will be found 888 pages of reading matter, closely set. Seventy-three original papers have been printed including seven not read at the Quincy meeting. There have been reported to the Journal some 243 local society meetings, many at length and of great interest, and not less than 800 papers read before the local societies have been mentioned, abstracted or printed in full.

There has been a gratifying increase in the advertising patronage of the Journal. This might have been made much greater had the editor not deemed it wise to exercise a rigid censorship over these columns. The advertisements now running have been secured by the personal efforts of the editor and other officers of the Society and no money has been paid out directly to advertising agents. A number of Chicago advertisements were obtained through the active efforts of Asst. Sec'y. James H. Stowell to whom thanks should be given. This brings up the matter of a business manager for the Journal which will doubtless be considered by the new Board of Councilors. The advertisements already secured will yield about \$1,800.00, but as a majority of them have only been running a short time Treasurer Brown will only report an income of about \$700 from this source. This is three times as much as Treasurer Brown reported for the previous year.

Owing to the great increase in the amount of material offered and the resulting enlargement of the Journal to 104 pages or more

each month it was thought desirable to put on a cover and this was done December, 1902. It helped the appearance of the Journal materially and had quite an influence in securing new advertisements.

The cost of printing, binding, posting, editing and expenses of the editorial office during the past year has been approximately \$3,375, considering the number of pages issued, the number of Journals printed, the increase in the cost of paper and labor, this compares very favorably with the expense per capita of issuing the transactions of the Society in the form of a bound volume.

Many serious problems come up in connection with the editing of the official Journal of this large and prosperous Society. Their consideration requires the best thoughts of this House of Delegates and to it they are respectfully referred.

Respectfully submitted,

G. N. Kreider,

Editor for year ending, May 1, 1903.

It was moved and seconded that the report be accepted and placed on file. Carried.

E. J. Brown, of Decatur, presented his annual report as Treasurer, which was referred to an Auditing Committee, consisting of H. W. Chapman, R. A. Kerr and W. G. Newcomb.

TREASURER'S REPORT.

April 29, 1903.

Everett J. Brown, Treasurer.

In Account with the Illinois State Medical Society:

Dr.	
To cash on hand May 19, 1902.....	\$249 70
Committee Arrangements, Quincy.....	157 07
Advertisers.....	705 43
Legislative Committee....	987 25
Receipt book.....	238 00
".....	310 00
".....	306 00
".....	306 00
".....	299 00
".....	327 35
".....	117 00
".....	327 00
".....	320 00
".....	299 00
".....	225 00
".....	409 00
".....	306 00
".....	85 00
" Sight drafts delinquent....	382 23

\$6,357 03

Cr.	
Voucher No.	
1 Dr. Park.....	\$54 00
2 Dr. Dock.....	32 00
3 Whitford.....	308 00
4 Treasurer's expense.....	76 15
5 Legislative committee.....	582 11
6 Expenses Editor.....	20 00
7 Secretary of State.....	10 00
8 Judicial.....	170 78

9	Illinois State Journal for printing Journal and stationery...	2,920	22
10	E. W. Weis, Honorarium.....	350	00
11	E. W. Weis, expense.....	46	30
12	Legislative Committee.....	899	04
13	Judicial Council, expense.....	223	82
14	Treasurer, Honorarium.....	150	00
15	Ottawa Free Trader.....	87	75
16	Editor, Honorarium expenses.....	795	00
		6,725	17

Deficit	\$368	14
---------------	-------	----

Approved:

H. W. Chapman,
R. A. Kerr,
W. K. Newcomb,
Auditing Committee.

Dr. J. F. Perey, of Galesburg, read the report of the Judicial Council.

REPORT OF JUDICIAL COUNCIL.

Mr. President and Members of the Illinois State Medical Society:

At the request of its chairman, Dr. Ensign, the secretary of your Judicial Council has the honor of presenting the following report of that body:

The first and sad duty which confronts us is to mention the death of our late chairman, Dr. E. P. Cook. At the last meeting of its members, official notice was taken of this, and a committee appointed to draft suitable resolutions, which would embody more particularly his relationship to the Judicial Council. The report of the committee is as follows:

Mr. Chairman and members of the Judicial Council:

Your committee to whom was referred the subject matter of this communication, beg to report as follows:

In view of the fact that our honored colleague and associate in this Council, Dr. Edgar P. Cook, has recently been removed from our midst by death, we deem it but just and fitting that we, who have been for some years so closely allied with him in the special work of this body, should place on record the respect and esteem in which Dr. Cook has been constantly held by us and our predecessors, as witnessed by his continuous occupancy of the chairmanship of this Council. Let it therefore be

Resolved, That in the death of Dr. Cook, we feel to realize the passing of a man of marked judicial character. One whose many years of association with and observation amongst physicians and societies of all lands, and his especial familiarity with the growth and needs of his own State Society,

pre-eminently fitted him for the numerous positions of honor and trust in that organization which he has occupied.

Resolved, further, That in our official association with him we have ever found him a man of generous instincts, always ready to counsel wisely and with forbearance, and at all times and under all circumstances having in view the interest and well-being of the profession of this State. Dignified, courteous and affable, his position was ever in the van of progress in those higher attributes which should ever characterize the medical man, and we tearfully bid farewell to him, while recognizing the continuous inspiration of his high example.

(Signed.)

O. B. Will.

During the year last past, the Council has received through permanent secretary Weis the application of 66 county and 7 district societies for representation in the State organization. On investigation of the constitution and by-laws of these applicants, it was determined that with a very few exceptions, all were eligible for affiliation with the State organization. The unadmitted societies just referred to will be admitted as soon as their constitution, required number of members and territorial boundaries conform to the requirements of the constitution of the State Society. The greater number of these societies seeking to affiliate with the parent organization, have so arranged their constitution and by-laws so as to conform to that of the State organization, but a few have not yet done this. It is earnestly urged, in the interest of a more perfect medical structure throughout the State, that all societies, county, city and district, should be governed in accordance with the provisions of the constitution of the State Society. The Council's recommendation was as follows:

Resolved, That each county society is hereby requested to take formal action at once, constituting itself a branch of the Illinois State Medical Society, in accordance with the provisions of the new constitution; that the secretary of the State Society be ordered to send a copy of this resolution and a blank form to the secretary of each local society;

That the secretary of the Judicial Council is hereby instructed to communicate with State Secretary Weis at the earliest possible moment.

The Council was instructed at the Quincy meeting to proceed to the incorporation of the State Society. We have the honor to report that this has now been accomplished. The legal number of authorized delegates from the societies which have applied to the Council and been accepted as affiliated bodies, should be recognized by the House of Delegates at this meeting. The societies which have not yet been accepted by the Council, were advised through State Secretary Weis to appoint their legal quota of delegates for this meeting, and await the action of the Council, after it was in possession of the facts.

On this point and in view of the new constitution which was adopted last year, the Council recommends that local societies which have not completed their affiliation, with the State Society, but which send duly accredited delegates, be considered as in the process of affiliation and that such delegates be accepted as in good standing for the purposes of this meeting.

The Journal of the Society, the care and development of which has been one of the most important duties devolving on the Council, has under the excellent management of Editor Dr. George N. Kreider, made gratifying progress. Doubtful in the beginning as were a large number of the membership of the society as to the wisdom of establishing a Journal, it has proven its right to exist and fill well a want that was not fully realized until the success of this publication from the start assured. What has so far been done toward making the Journal more valuable to its constituency, you already know. The reading matter, editorials, both scientific and general, together with the society reports, especially the extensive abstracts of the proceedings of the Chicago Medical Society, now make up a monthly Journal as useful and as valuable as any of its class. You will also notice that the number of pages necessary to accommodate business firms who are seeking its pages as

an advertising medium, has greatly increased. More can be done along this line, if the membership will but interest itself in the matter when purchasing goods from drug or instrument houses, urging them to patronize the advertising pages of our Journal and then loyally supporting them when they do. This matter becomes of additional importance when the Journal is recognized as the official organ by every affiliated medical body in the State. When the time comes, as it must, that the Journal is the official printed representative of every medical organization in the State that would logically look to us for recognition, this Society can have not only a model and profitable Medical Journal, but it can be issued biweekly or even weekly if desired.

In addition to this, it is quite certain that if all the members of the local societies in affiliation with the State Society become actual members of the larger society, and will lend their influence to the support of the objects for which the State organization stands, especially all the interests which the Journal advances, it will be a matter of only a short time before the amount of the annual dues for the membership in the State Society can be reduced. That this is one of the probabilities shortly to be realized, will we think be shown, when the report to the Council by Editor Kreider is read.

We also have to report that through the influence of the Council the discontinuance of the Peoria Medical Journal and the Journal of the Morgan County Medical Society, printed at Jacksonville, has been secured. This carried with it, as far as it was possible to do so, the transference of the advertising contracts and the subscription lists of both of these Journals to the credit of the Journal of the Illinois State Medical Society.

The Chief work of the Council this year can perhaps best be epitomized by the statement that our constant endeavor has been to unify the profession. The discontinuance of the two medical journals just mentioned has been an aid to this. The concentration of effort in medical publication and advertising influence which it encouraged, has al-

ready been felt and appreciated by our Journal. We are also gratified to report that during the year which this report covers, there has been no serious discord in medical society affairs over which the Council has any jurisdiction.

A liberal interpretation has been made of the requirements of our new constitution as to the total membership required before a district society could be recognized as an affiliated body with the larger organization of the State. At the same time, the spirit of the constitution has in no case been violated.

The work of the State Board of Health during the year just past has been noted, and whenever its character and importance were of sufficient value for commendation in the columns of the Journal, such has been counseled and given it. The State Board of Health of Illinois is the Light House in matters medical for the State. It is the only representative before the people that the medical men and women of the State have. It is the only organized representative of the practice of medicine that the people of the State at large recognize or really care anything about. The people have given it large power and rarely appeal from its verdicts in matters medical. Whatever the Board of Health does for the good of the State, not only benefits the people as a whole, but reflects credit upon our profession, since its membership is supposed to embody the wisdom of the whole along such lines and it is recognized as carrying on a work that is far reaching in its import for good. Any omission in such must be correspondingly derogatory.

For this reason, the Council has deemed it expedient during the year to unofficially call the attention of the President of the State Board of Health, Dr. Geo. W. Webster, to the failure of his Board to make a yearly report as required by law. The attention of the Council had several times been called to the fact of the non-appearance of this report since the year 1896-97. In view of the general professional interest in the work of the Board, the Secretary of the Council was instructed to send to Dr. Geo. W. Webster, President of the State Board of Health, a

communication as follows:

Galesburg, Ill., July 7, 1902.

Geo. W. Webster,

President Illinois State Board of Health,
Chicago, Ill.

Dear Doctor: I was instructed by the members of the Judicial Council of the Illinois State Medical Society which held a special meeting in the city of Springfield, June 30, 1902, to respectfully urge your Board to no longer delay the publication of its full report as required by law. The Council felt constrained to do this because of the intimate relation existing between the Illinois State Medical Society and the Illinois State Board of Health. The unanimously expressed opinion of the members was that only by the immediate publication of the report of your Board, would the adverse criticism which is coming from various parts of the State (because of the failure of the report to appear) be adequately allayed.

With great respect, believe me,

Very sincerely yours,

(Signed) J. F. Percy, Sec'y.

To this Dr. Webster replied as follows, under date of July 29, 1902:

Chicago, Ill., July 29, 1902.

My Dear Doctor Percy: I beg leave to acknowledge the receipt of your letter of July 7th, in which the Judicial Council urges the Illinois State Board of Health to no longer delay the publication of its full report as requested by law. I will bring the matter formally before the Board at the October meeting. Meanwhile, if you care to let me know, I would be pleased to learn of the source and extent of the "adverse criticism" to which you refer.

Very respectfully yours,

(Signed) Geo. W. Webster.

The answer of the Secretary of the Council to the above letter of President Webster was as follows:

Dear Doctor Webster: Your letter of July 29th, in reference to the non-appearance of the Illinois State Board report, was awaiting me on my return from my vacation yesterday. I am not at liberty without the authority of the Council to state "the source and extent" of the "adverse criticism" re-

ferred to. I will, however, submit your letter to the Council at once, and when their wishes are known I will communicate with you again.

Respectfully,
(Signed.) J. F. Percy, Sec'y.

This closed the correspondence. It was the opinion of the members of the Council, that we had performed our duty when we called the attention of the President of the State Board of Health to the fact of the non-appearance for so many years, of the report of his Board.

It may be added that the Secretary of the Council has recently received from Dr. Egan, Secretary of the State Board of Health, a generalized financial report of his Board covering the interval referred to above. As these reports have been published since the date of the above correspondence, it is gratifying to know that the State Board of Health has found it possible to make an attempt to bring this report up to the present.

At this meeting we can also add the final chapter in the controversy between Hon. O. F. Berry of Carthage, Ill., and the physicians in his district. It will be remembered that there was strong opposition on the part of the physicians in the 32d Senatorial district to the nomination of Mr. Berry as Senator from that district. He was nominated, however, and as a result there developed one of the most interesting political contests in the history of this State. It is the first time in Illinois, that the physicians of a given district appealed directly to the voters from the nominations made at the primaries. It was this fact that led Mr. Berry to openly defy the profession and into the unfortunate mistake of believing that he could be elected with practically the combined opposition of the physicians in his district. This attitude was maintained until a short time before the election, when the political friends of Mr. Berry believed that he would be defeated unless he could change the attitude of these physicians. Acting on this belief, some of the friends of Mr. Berry arranged a meeting at Macomb, Ill., with a representative of the Judicial

Council. At this meeting the political situation in the 32d Senatorial district was thoroughly canvassed. What occurred at this meeting was made part of our report last year, and as it was published in the Journal, it will not be repeated here. At this meeting, however, it was shown that as a consequence of the opposition of the physicians the election of Mr. Berry was in doubt. The representative of the Council at this conference had been instructed that he was representing the physicians of the 32d Senatorial District, and that he was to do what he thought would best represent their wishes. The Council's representative knew that all that the physicians in that district wanted, was a guarantee that their representative both in the Senate and the House, would not offensively champion legislation that could only, if successful, degrade the medical profession of the State. When this was stated to Mr. Berry's friends, they readily gave their assent and their positive assurance to this, viz.: That in the event of all opposition to Mr. Berry being withdrawn by the physicians, that he would support any measure in the Senate of Illinois desired by the instructed representatives of the State Medical Society. As a result of this conference the following letter was sent to every physician in the 32d Senatorial district, one hundred and twenty-one in number:

October 31, 1902.

Dear Doctor: Mr. Berry has made a favorable reply to the letter sent you about two weeks ago as to his future attitude toward the medical profession. In addition to this, some of his political friends who are high in the councils of the Republican party in the State, have authorized the use of the following: "That Mr. O. F. Berry of Carthage, Illinois, in the event of his election, has given satisfactory assurance through his friends that he will not oppose such legislation as may be desired by the Illinois State Medical Society."

(Signed.) Percy, Sec'y.

About the same time Mr. Berry also sent out the following:

Carthage, Ill., Oct. 28, 1902.

Dear Sir: There has been during the

campaign considerable controversy and considerable letter writing in reference to my position towards the medical profession. I have taken some pains to set the matter right, and I now feel that in view of the situation as it now stands and the information that all physicians must have as to the real situation and to my position, that I am at least, entitled to the support of every physician in my own party. I do not know the politics of every physician in this district, but I feel that every physician, having now fully investigated the matter, surely has sufficient proof before him to justify him in supporting me, and whatever may be your politics, I would be glad of your support, and assure you that you will have no occasion so far as I am concerned, to regret it.

Very respectfully yours,

(Signed.) O. F. Berry.

It may be stated here, that Mr. Berry did not "take some pains to set the matter right" before the physicians of his district until the near approach of election day, when his political friends predicted his defeat if the matter were not fixed up with his opponents in the medical profession. Had he come out in the beginning with the clear statement which he made at the eleventh hour, there would have been little opposition as far as the physicians were concerned, to either his nomination or election.

The Judicial Council feel that their management of this controversy, unique as it was in the annals of the medico-political history of Illinois, has redounded to the honor of the profession of this state and has established a precedent which can be easily followed by the profession hereafter when necessary. Of one thing we are convinced—it is of the value of united action regardless of party, when our larger interests are at stake. This was royally exemplified by the physicians in the 32d district. Had they not stood together when it was most necessary to do so, the letter from Mr. Berry just read, need never have been written by him, and the Judicial Council would have been left in an unenviable position.

But one note of discord as far as the Council is concerned, appeared in this controversy,

and in the interests of the correct recording of political history as it concerns the medical profession of this state, it should be noted here. Under date of October 21, 1902, the State Board of Health of Illinois sent a letter signed by its Secretary, Dr. Egan, to every physician in the 32d senatorial district, which distinctly stated that "The State Board of Health has never been opposed to the election of Mr. Berry" and further "No member of the State Board of Health has stated, either politically or otherwise, that Senator Berry has always been opposed to measures elevating the standard of the medical profession or promoting the interests of the public health. No member of the Board has knowledge of even one measure of this character which has been opposed by Senator Berry. To the knowledge of the members of the State Board of Health, Senator Berry favored and supported in the 41st General Assembly, bills advocated by members of the medical profession, five of which became laws. The Secretary of the Board, furthermore, has positive knowledge that Mr. Berry while Senator in the 41st General Assembly, declined to favor any legislation asked for by the osteopaths which had not received the approval of the State Board of Health." One more quotation to show the general tenor of the letter in question: "The Illinois State Board of Health is not a political organization. No member of the present Board owes his appointment to political preferment. Each and every member was appointed by Governor Yates on the endorsement of the physicians of the State. The Board takes no part in politics, and neither oppose nor favors the election of any candidate for a political office. In the opinion of the members, any attempt to cause the Board to pursue a different course should be strongly deprecated."

The quotations above comprise about half of the letter, and give a fairly good idea of its purport, viz.: to aid the election of Mr. Berry regardless of the opposition of the physicians in his district.

To the Judicial Council this letter came as an embarrassment, and especially so when it is known that in all of its public correspondence and in all of the speeches made by the

Secretary of the Council before the various medical societies in that district, the name and authority of the State Board of Health for our statements, had been studiously avoided. But before taking up the fight against Mr. Berry by request of the physicians in his district, the Council obtained not only their (the physicians) side of the case, but also confirmed the facts by statements obtained by various members of the Council from Dr. Egan, Secretary of the Board.

As stated above, this action on the part of the State Board of Health put the Judicial Council in an embarrassing position. It necessitated the writing of many letters in answer to inquiries from the physicians interested, as to the right of the State Board of Health to involve itself unasked in a purely local political contest.

The Council recognizes the right of the State Board of Health not only to look after the matters for which it was primarily organized, but possibly to go even further than this. But when the State Board of Health does go into politics, as it did in this instance in spite of the assumed protest to the contrary which their letter contained; it is high time that some plan should be arranged between this State Society and the State Board for a mutual understanding. To do other than this cannot but put the State Health Board in the position of open antagonism to the State Medical Society, and this should not be allowed to occur again.

This report would not be complete did it not contain some mention at least, of the good services rendered the new State Medical Practice Act in the Senate by Senator O. F. Berry of the 32d Senatorial District. No matter what the final fate of the bill may be in the House, in its passage through the Senate it found an active champion in Senator Berry. It is not beyond the bounds of human probability that all matters relative to medical legislation would be distasteful to this gentleman at this session of the legislature, but if this were true, no hint of it was shown in his attitude toward the law asked for by this Society before its passage in the Senate. His services are appreciated best by those who know of their value, and under the

circumstances some recognition should be accorded them by this organization.

In brief this is our report, all of which is

Respectfully submitted,

(Signed.)

J. F. Percy,
Secretary.

Dr. Wm. A. Evans moved the acceptance of the report. Seconded.

After some discussion, which was participated in by Drs. Geo. W. Webster, Jas. A. Egan, and J. F. Percy, the report was accepted.

Dr. C. W. Hall, of Kewanee, Chairman, presented a brief report of the Committee on Medical Societies, which, on motion, was accepted.

Mr. President: During the past year sixteen Counties have been organized, leaving twenty at present unorganized. Of this twenty, only two are not represented. I would like to call your attention to this map (indicating). The red part of the map represents the organized County Societies in the State, and yet the situation is even better than it appears. We have prejudice to face now in organizing rather than indifference. For instance, where you see this white portion of the map, they are thoroughly organized in the Brainerd District Society. Where you see the white portion, McHenry County is united with Kane County. The Counties of Iroquois and Ford are united in a Tri-County Society.

You will find the Aesculapian Society is quite thoroughly organized. Putnam County has no organization, because it is so small.

In concluding the work of this Committee, I wish to thank personally those members of the profession who have so kindly aided us in the work during the past ten years. They have been uniformly courteous and kind to us, and our work has been very agreeable, and in the name of the Committee I want to thank all for the very kind assistance which they have given us.

The report of the Committee on Medical Legislation was called for.

The Chairman of this Committee, Dr. Carl E. Black, of Jacksonville, stated that the Committee was not prepared to make any formal report at this time.

The report of the Committee on Necrology was read by Dr. C. B. Johnson, of Champaign.

In connection with this report, Dr. C. C. Hunt, of Dixon, read a short report on the life-work of the late Dr. E. P. Cook.

REPORT OF COMMITTEE ON NECROLOGY.

BY C. B. JOHNSON, M. D., CHAIRMAN.

Dr. O. A. Dean, President Southern Illinois Medical Association and a resident of Campbell Hill, died August 2, 1902.

Dr. E. P. Cook, Mendota, Ill., died at his home October 31, 1902, age 70 years.

Dr. G. W. Fringer, Pana, died November 18, 1902, age 76 years.

Dr. Harrison Steele, Peoria, died November 14, 1902, age 66 years.

Dr. John L. White of Bloomington, died May 13, 1902; Ex-President of State Society.

Dr. Sam J. Jones, Chicago, died October 4, 1902, age 66 years.

Dr. Wm. W. Hester, Chicago, died July 18, 1902, age 67 years.

Dr. Katherine Miller, Lincoln, died August 1, 1901.

Dr. Margaret Taylor Shutt, Springfield, died at her home January 24, 1903.

Dr. Julius Kohl, Belleville, died January 4, 1903, age 65 years.

Dr. E. T. Dickerman, Springfield, died January 23, 1903, age 37 years.

Dr. John Murphy, Peoria, died January 21, 1903, age 86 years.

Dr. Hugh Marshall, Monmouth, died at his home April 10, 1903, age 78 years.

A MEMOIR OF EDGAR PUMPHREY COOK, M. D.

For the Committee on Necrology. By C. C. Hunt, M. D., Dixon, Ill.

Edgar Pumphrey Cook was born in West Virginia, May 2, 1833, and died at Mendota, Illinois, October 31, 1902. He was the eldest son of Dr. William J. and Drusilla Pumphrey Cook, the father being an alumnus of the University of Maryland, Medical Department, 1826. When three years of age the subject of this sketch removed with his parents to Middletown, Guernsey County, Ohio, where he grew to manhood. Was educated in the common school of the place and at the Jefferson Academy, entered the Cleve-

land Medical College, Cleveland, Ohio, at the age of eighteen. He received the M. D. degree from that institution when not quite twenty-one and began the practice of Medicine at Mendota, Illinois, in 1855, where he continued in active practice for forty-five years. Was stricken with angina pectoris in March, 1900, and died of this disorder about two and a half years after the initial onset. In 1856 he married Catherine Morrison, sister of Dr. Morrison, the originator of the dental engine. The issue of this marriage was eleven children, five of whom survive, and two of whom are members of this Society and engaged in active practice at the home of their birth, Mendota. Mrs. Cook came to her death a few months preceding that of her husband.

Such is the simple story of the life and death of our associate member, Dr. E. P. Cook. To have been born, to have grown to manhood, to have married, to have been a parent, to have practiced the healing art and to have died, might have been said of unknown thousands from the age of Hyppocrates down to the present time. But it has not been the privilege of all, nay, it has been the felicity of comparatively few, to have enjoyed throughout a long professional career, the confidence, esteem and admiration to a degree such as was bestowed upon Dr. Cook by laity and confreres alike.

The secret, it has been truly said, of enduring personal popularity has not been detected. It is a gift possessed by the few only. It has eluded art. Neither pen nor brush nor chisel has ever portrayed it. Those of us who knew Dr. Cook personally could verify it in the individual, but nothing that he ever wrote or was written of him, no photograph or pen-sketch or picture of any kind ever revealed it. One must have taken him by the hand, felt his friendly grasp, looked him in the eye, heard his merry, joyous laugh, or have met him in grave and earnest counsel at the bedside, to fully understand the source and secret of this subtle yet potential personality. Dr. Cook enjoyed for many years a wide acquaintance among the physicians of the State, and few were there among the members of the Illinois

State Medical Society during the last third of a century who did not know him personally.

Next to his own family he loved his profession most. He was a physician in the highest sense of the word. Bold and fearless when he knew his ground, and as a diagnostician he was more than commonly accurate, he was ever cautious and painstaking to the end that he might conserve the best interests of his patient. As an all-around practitioner he had few equals, perhaps no superior anywhere. Though his principal field of labor was in a small country town and its adjacent territory he had a large consulting practice which frequently took him fifty or a hundred or more miles distant, and he successfully performed many surgical operations that would have done credit to those of much greater pretensions. In 1863 he made an abdominal section for the removal of an extra-uterine foetus, one of the first successful operations for ectopic pregnancy done in the United States. In 1867 he did a laryngotomy and removed a large mulberry growth from the underside of one of the vocal cords of a fourteen year old boy, the first successful laryngotomy in the north-west. The writer was present when he removed via perineal section a large stone from the bladder of a young married man. The calculus was so large as to require crushing. The major fragment contained a three inch slate pencil as a nucleus which had been placed there by the patient six years previously. Each of these operations were successfully performed and the subjects of them lived many years afterwards. When we consider that, at the time these operations were done, skilled assistants were not available, trained nurses not yet born, bacteriology an unbegotten science, sepsis and assepsis unknown, and hemostatic forceps, absorbable ligatures and sutures, and many other accessories now regarded as indispensable to the successful performance of similar operations, formed not even "the baseless fabrics of a vision," we cannot help but marvel at the temerity and the achievements of this unpretentious country doctor. Dr. Cook possessed a predilection for surgery, but whether as physi-

cian or surgeon he was a student always, and it was his constant endeavor to avail himself of all possible sources of information that he might keep pace with the rapid advances of the science of his choice. While he clung tenaciously to that which was good he was ever ready to accept that which was better. He was an enthusiast in his profession, and, naturally, was among the first to adopt and practice the new medicine and the new surgery the fruits of the researches of Pasteur and Koch and Lister. Dr. Cook was of all things resourceful, a born tactician. As guileless as a babe himself yet he knew the jugler and the cheat by intuition. The truth of this statement was made manifest in the following reminiscence: Some thirty odd years ago suit for malpractice was brought against a young doctor on account of delayed union of a fractured tibia. The burden of plaintiff's complaint was that his leg was left useless, that he could bear no weight upon it and that the pain he suffered was almost unbearable. Dr. Cook and the writer were subpoenaed as expert witnesses. The plaintiff made every effort during the trial to show his false joint and the functional defects of his leg to the jury. While being examined by medical witnesses he stood upon his sound leg placing the foot of the bared fractured leg upon a chair facing the jury, and evinced such a degree of pain and helplessness as to excite the profound sympathy of all. Dr. Cook, who was the last medical witness, was making his examination he suddenly said, "Now put up the other leg." Before plaintiff had time to think or his attorney to interfere, down went the injured leg with foot upon the floor and up went the sound leg with foot upon the chair, plaintiff bearing his weight upon the damaged member without a wince, and his case was lost.

Though rather small of frame Dr. Cook possessed a rugged constitution, great capacity to endure strain, tough fibre, a good stomach, placid temperament, and, up to the hour when he was stricken with the malady which afterwards caused his death, was in robust health. He never indulged in tobacco or ardent spirits and his language was always chaste. Orthodox in his religious re-

lations, sincere and faithful always, he was in no sense an ascetic. Gloomy bigotry was foreign to his daily life. His urbanity was genial and humorous. He was tolerant of the views of others while he clung consistently to his own convictions. He exacted nothing from his fellowmen that he was not willing to concede to them. He was always deeply interested in all matters pertaining to the church of his choice and in the public weal generally. Actuated as he was by "the divine spark of enthusiasm" he naturally took a leading part in every enterprise or activity in which he became engaged. He never sought office but when it came to him he executed the duties pertaining thereto thoroughly and efficiently. In 1880 he was President of this Society and at the time of his death was chairman of the Judicial Council. He was one of the early presidents of his home county (LaSalle) Medical Society, twice president of the North Central Illinois Medical Association, twice president of the Illinois Army and Navy Medical Society, delegate member of the Ninth International Medical Congress at Washington, D. C., 1887, and of the Tenth International Medical Congress at Berlin, 1890. So began, lived and closed the cheery, inspiring, altruistic, symmetrical life of our long-time friend and confrere, Doctor Edgar Pumphrey Cook.

On motion, the report was accepted by a rising vote, and referred to the Committee on Publication.

The report of the Committee on Society History was called for, but no report was presented.

N. S. Davis, Jr., of Chicago, Chairman, presented a brief report of the Committee on Pharmacopoeia, and, on motion, the report was accepted.

REPORT OF THE COMMITTEE ON THE PHARMACOPOEIA.

The first Pharmacopoeia of the United States was published in 1820, and it has been revised regularly every ten years since that time. The one now official is the seventh decennial revision, known as that of 1890. From the first edition the Pharmacopoeia has been revised by a committee chosen by a decennial convention, which

meets in the city of Washington, composed of delegates from State Medical Societies, Medical Colleges, Pharmaceutical Societies and Colleges, the American Medical Association, the American Pharmaceutical Association and the medical branches of the Federal Government: the Army, Navy and the Marine Hospital Service.

The Committee of Revision consists of twenty-five physicians, botanists, pharmacologists, chemists and pharmacists, a chairman and the president of convention ex-officio.

THE PHARMACOPOEIAL CONVENTION.

The committee publishes the work on its own account and as it serves practically without remuneration has received considerable revenue from the sale of the book, which has been expended on research and bibliographic work to facilitate the labors of subsequent revision. In order to relieve the committee of the details consequent upon the publication and sale of the books, there was at the last decennial convention in 1900, created a Board of Trustees of five members to attend to all financial transactions, of which the chairman of the committee and the president of the convention are members ex-officio. At this meeting the Pharmacopoeial convention was incorporated under the laws of the District of Columbia and a constitution and by-laws were adopted, thus giving to the convention permanency and stability. The committee suffered a great loss in 1901, in the death of its chairman, Dr. Charles Rice of New York, who had filled the position with consummate skill and ability since 1880. He has been succeeded by Professor J. P. Remington of Philadelphia. The committee lost also in the death of Dr. E. R. Squibb of Brooklyn, N. Y., one of its oldest and most valued co-workers.

PLAN OF REVISION.

As it may be of interest to the members of the Society to know something about the work of revision, we shall give a brief outline of the methods employed.

The committee chosen at each decennial convention holds over until the next convention, and after the revision is completed and the book published, the committee con-

tinues its investigations through a research committee, which reports annually to the American Pharmaceutical Association, consisting of experts in various lines of pharmaceutical research. During the past decade this work has been chiefly under the direction of Professor Albert B. Prescott of the University of Michigan. Under the direction of the chairman of the committee, compilations are made of criticisms and observations on the official articles of the Pharmacopoeia, and these are published at intervals as "Digests" for the convenience of members and of those interested in the work. The succeeding committee is thus furnished with much valuable information and guided in beginning its labor of revision.

INSTRUCTIONS OF THE CONVENTION.

The chief work of the convention aside from the election of the committee of revision and its officers is to formulate general rules or principles to govern the next committee in the work of revision.

Preparatory to the work of revision subcommittees are appointed to which the work is apportioned as follows:

- I. Therapeutics.
- II. Posology.
- III. Botany and Pharmacognosy.
- IV. General and Inorganic Chemistry.
- V. Organic Chemistry.
- VI. Proximate Assays.
- VII. Volatile Oils and allied substances.
- VIII. Extracts; Tinctures, etc.
- IX. Aromatic Waters and Spirits.
- X. Cerates and allied compounds (externals.)
- XI. Syrups and Elixirs.
- XII. Miscellaneous Galenicals.
- XIII. Weights and Measures.
- XIV. Scope and Statistics.
- XV. Nomenclature.

THE PRESENT STATUS OF THE WORK.

The work of the present revision has been delayed, partly by the death of Dr. Rice, the chairman, and for other reasons, so that the book will probably not be published for another year. It is customary to fix a date when it will become official some months after its date of publication, so that physicians may become acquainted with the most

important changes in it, and chemists and pharmacists may have opportunity to conform to the new standards of purity and strength.

IMPORTANT CHANGES.

One of the most important questions which the committee of revision has had to consider is the strength of Tinctures. As is well known these vary in drug strength from 5 to 50 per cent. If this difference were inversely proportioned to the strength of the drugs, the strong drugs would have low percentages, and the weak higher ones, the dosage of all would be much alike. But on the contrary, many simple bitter tonics and aromatics are in the 10, 15 and 20 per cent. class, and the most potent drugs, aconite and veratrum vivide, are respectively 35 and 40 per cent. This problem of reclassifying, and therefore changing the strength of tinctures, has been much debated in the committee of revision now at work. The action taken last fall by an international conference which met at Brussels to determine the proper strength of potent drugs has made a decision at last comparatively easy. By this body it was recommended that there be only two classes of Tinctures, viz: that the tinctures of potent drugs be of 10 per cent. drug strength, and all others except compound tinctures be of 20 per cent. drug strength. At this conference, the delegation from the United States was led by H. C. Wood of Philadelphia.

THE SCOPE OF THE PHARMACOPOEIA.

The admission to the Pharmacopoeia of articles controlled by patent or proprietary rights, has always been a question difficult of solution. The last convention adopted the following resolution on this point:

"The Committee of Revision is authorized to admit into the Pharmacopoeia any product of nature of known origin; also any synthetized product of definite composition, which is in common use by the medical profession, the identity, purity or strength of which can be determined. No compound or mixture shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights."

Inasmuch as adherence to this rule requires a definition as to the different terms employed and examination as to the status of many of the articles which have been proposed for admission, it was decided "that substances be admitted for which there is or may be a product or process patent, which expires during this decade (i. e. before 1910), carrying with it the expiration of the trademarked name, as distinguished from a symbol or device."

The object of this limitation is to admit such articles as are largely used by the profession, which will be entirely free some time during the life of the pending Pharmacopoeia. For example, the patent on Phenacetine expires in 1906, when, according to the best legal opinion, the copyright on the trade-name will also expire.

On the other hand, an article so valuable and largely employed as Ichthyol cannot be admitted to the U. S. Pharmacopoeia because it is not patented nor made by a patent process, but the name is copyrighted and affords a perpetual monopoly. Ichthyol is essentially a patent remedy, although its composition is not secret.

The discussion of the ethics involved in the use of these articles by the profession cannot be taken up here, but sufficient has been shown to direct attention to the anomalous position of some of these articles and the necessity for a revision of the patent and trade-mark laws, as far as they apply to medicinal articles.

It has been strenuously urged by many of the physicians of the pharmacopoeia revision committee that diphtheria antitoxin and certain animal extracts be included in the pharmacopoeia. However, as no test of purity or strength of antitoxin can be established except such as necessitates physiological experiments upon living animals, but which druggists and chemists cannot make, it is excluded by a specific rule or instruction adopted by the last pharmacopoeia convention. Nevertheless, a special committee is now working upon the problem, and I hope will find it possible to admit it. This difficulty would not exist if a government inspection of all antitoxins was made and

the purity and strength was certified to.

In order to insure greater uniformity in the strength of preparations made from plants, assay processes are described in the pharmacopoeia whenever processes can be found that are not too complicated. It is probable that in the forthcoming pharmacopoeia the number of assayed drugs will be considerably increased.

THE MEDICAL FUNCTION OF THE U. S. PHARMACOPOEIA.

Complaint has been made that the U. S. Pharmacopoeia is not purchased by the medical profession to the extent that it should be. This criticism is not altogether just, for the function of the Pharmacopoeia is to be a standard for the identity, purity, quality and strength of medicinal substances and to give directions for the valuation, purification, preservation, preparation and compounding of medicinal preparations. Physicians are chiefly interested in the identity, purity and strength of drugs, and only incidentally in the valuation and compounding of preparations, but the pharmacist is interested in all these. Although the U. S. Pharmacopoeia is a standard for both physician and pharmacist and its text is used as a basis for medical works treating of materia medica and therapeutics, naturally the physician uses the latter instead of the pharmacopoeia, for they contain descriptions of physiological and therapeutic action to which no reference is made in the former. It is, however, extremely important that the standard which both professions rely upon be made after careful study by representatives of both. It is also important that all members of the medical profession keep in touch with, and discuss the problem which the Pharmacopoeia revision committee must solve.

N. S. Davis, Jr.,
Carl S. N. Halburg, Ph. G.
Robt. Babcock.

Dr. Chapman, Chairman of the Auditing Committee, reported that the Committee had carefully examined the vouchers and reports of the Treasurer, and had found them correct, and the Committee approved the report.

On motion, the report of the Auditing Committee was accepted.

Under the head of New Business, Dr. J. W. Pettit moved that the Committee on Medical Legislation be empowered to make its report complete, and have it published in the Journal as soon as it was ready for publication. Carried.

Dr. W. O. Ensign, of Rutland, presented the following resolutions, which were unanimously carried:

Resolved, That the Illinois State Medical Society hereby expresses its compliments to Governor Richard Yates, and take this opportunity to thank him for recommending in his message the Separate Board of Examiners, and any other support which he has given it since it has been before the Legislature; also that we express our thanks and hearty appreciation of the services which have been rendered this Society by Senator (Dr.) James H. Watson, and Representative (Dr.) John A. Wheeler, in introducing the Societies Bill into the two Houses of the Legislature, and the labor and influence which have been so freely expended by them in behalf of the profession of this State.

Resolved, That a copy of these resolutions be at once transmitted by the Secretary of this Society to Governor Yates, and Drs. Watson and Wheeler.

Dr. J. W. Pettit offered a resolution in regard to the Medical Practice Act, which, on motion, was unanimously adopted.

Resolved, That the Illinois State Medical Society in convention assembled representing five thousand physicians of the State, respectfully request Governor Yates, speaker J. O. Miller, Hon. Shurtleff, Dr. Watson and Dr. Wheeler to use their influence to have Senate Bill 370 reported out of House Judiciary Committee and otherwise promote its passage.

Dr. Wm. A. Evans moved that the dues for the fiscal year, 1903-04, be \$1.00, provided that if the American Medical Association levies an assessment that the amount of this per capita assessment be added to the sum of \$1.00. Seconded.

After some discussion by Drs. Evans, Pettit, Jenks, Kreider, Baker, Dr. Pettit

moved that a Committee of five be appointed by the President, of which Dr. Evans shall be Chairman, to take this matter up and report at the meeting tomorrow afternoon. Seconded.

After some discussion by Dr. Will, the motion of Dr. Pettit was carried.

The President appointed on this Committee Drs. Wm. A. Evans, Baker, Brown, Kreider and Pettit.

The Secretary read a communication from the Census Bureau at Washington, D. C., regarding the registration of vital statistics, and, on motion of Dr. Pettit, this communication was referred to the Committee on Medical Registration.

Dr. Pettit moved that a Committee of three, of which Dr. Hall shall be Chairman, be appointed to divide the State into Councilor Districts, and report the first thing tomorrow afternoon, so that the House might know how to elect Councilors. Carried.

The President appointed as this Committee Drs. Hall, Weis and Preble.

On motion, the House then adjourned until Friday at 2 P. M.

May 1, 1903—Third Session.

The House was called to order at 2:10 P. M. by the President.

The Secretary called the roll, and the quorum was present.

Dr. C. W. Hall, Chairman, presented the report of the Committee on Councilor Districts.

The Committee appointed to apportion the State into nine councilor districts as provided by the Constitution adopted at this session of the State Medical Society, fully appreciates the responsibility of its labor and has been governed solely in its deliberation by the motive to divide the State in districts that will be most suitable for the whole profession. We have divided the State, considering mostly railroad connections and previous organizations. Second, we considered in our deliberations the advisability of making our apportionment either upon territorial lines or according to population and decided the territorial distribution to be the better and recommend its adoption. Third, we realize the difficulty of a perfect division, but

after due deliberation present the following apportionment as the best possible division at the present time:

FIRST DISTRICT—Comprises the counties of Cook, Lake, McHenry, Boone, Kane, Du Page, Kendall, Will, Grundy, Kankakee.

SECOND DISTRICT—Jo Daviess, Stephenson, Winnebago, Carroll, Ogle, DeKalb, Lee, Whiteside, Bureau, Putnam, Marshall, La Salle.

THIRD DISTRICT—Rock Island, Henry, Mercer, Stark, Knox, Warren, Henderson, Hancock, McDonough, Fulton, Schuyler, Brown, Adams.

FOURTH DISTRICT—Peoria, Tazewell, Woodford, McLean, Livingston, Ford, Iroquois.

FIFTH DISTRICT—De Witt, Piatt, Champaign, Vermilion, Macon, Moultrie, Douglas, Edgar, Shelby, Coles, Cumberland, Clark.

SIXTH DISTRICT—Mason, Logan, Menard, Cass, Pike, Scott, Morgan, Sangamon, Christian, Calhoun, Greene, Jersey, Macoupin, Montgomery.

SEVENTH DISTRICT—Effingham, Jasper, Crawford, Clay, Richland, Lawrence, Jefferson, Wayne, Edwards, Wabash.

EIGHTH DISTRICT—Madison, Bond, Fayette, Marion, Clinton, St. Clair, Washington, Monroe.

NINTH DISTRICT—Randolph, Perry, Franklin, Hamilton, White, Jackson, Williamson, Saline, Gallatin, Union, Johnson, Pope, Hardin, Alexander, Pulaski, Massac.

C. W. Hall,

E. W. Weis,

R. B. Preble,

Committee.

On motion of Dr. Frank X. Walls, the report was adopted.

Dr. William A. Evans, Chairman of the Committee appointed at the previous session to consider the amount of the annual dues for the year 1903-04, stated that the Committee recommends that the dues for the fiscal year, 1903-04, be \$1.50, provided that if the American Medical Association levies a per capita tax, that this amount be added to the assessment.

As the mover of the motion of yesterday, he withdrew that motion with the consent of

the second, and then moved the adoption of the report of the Committee. Seconded.

After some discussion, which was participated in by Drs. Evans, Kerr, Carter, Pettit, Jones, the report of the Committee was adopted.

Dr. Evans stated that the Committee had also considered the finances in connection with the publication of the Journal of the Society, and on recommendation of the present Editor of the Journal, he moved that the House of Delegates recommend to the Council that it establish a fund of \$2,500 for the Journal for the current fiscal year, and that the expenses to the Society of the Journal shall not exceed this amount. Seconded.

After some discussion by Dr. Pettit, the motion was carried.

The House then proceeded to the election of officers, with the following result:

President, Dr. Carl E. Black, Jacksonville.

Secretary, Dr. E. W. Weis, Ottawa.

Treasurer, Dr. E. J. Brown, Decatur.

The next order was the election of Councilors.

Dr. W. O. Ensign moved that in electing the nine Councilors they draw lots to see which shall serve for one year, which for two years, and which for three years. Seconded and carried.

On motion of Dr. Evans, a recess of ten minutes was taken for the members of the different Districts to get together, for the purpose of selecting the best men of the respective Districts for Councilors.

On reconvening, the following Councilors were elected:

District No. 1, Dr. M. L. Harris, Chicago.

District No. 2, Dr. W. O. Ensign, Rutland.

District No. 3, Dr. J. F. Percy, Galesburg.

District No. 4, Dr. O. B. Will, Peoria.

District No. 5, Dr. W. K. Newcomb, Champaign.

District No. 6, Dr. L. J. Harvey, Griggsville.

District No. 7, Dr. C. Barlow, Robinson.

District No. 8, Dr. H. C. Fairbrother, East St. Louis.

District No. 9, Dr. J. C. Sullivan, Cairo.

The following gentlemen were elected Del-

legates to the House of Delegates of the American Medical Association:

Name and Address.	Term.
M. L. Harris, Chicago	2 years
C. C. Hunt, Dixon	2 years
E. Mammen, Bloomington	2 years
A. C. Cotton, Chicago	2 years
G. L. Eyster, Rock Island	2 years
G. W. Webster, Chicago	1 year
D. W. Graham, Chicago	1 year
James Campbell, Elgin	1 year
H. C. Mitchell, Carbondale	1 year

* ALTERNATES.

J. C. Foley, Waukegan	1 year
Chas. True, Kankakee	1 year
J. L. Wiggins, East St. Louis	1 year
S. M. Wylie, Paxton	1 year
W. A. Evans, Chicago	1 year

Bloomington was selected as the place for holding the next annual meeting.

Dr. James H. Stowell stated that the wife of Dr. Wm. E. Quine lies at the point of death from tuberculosis, and he moved that the Society extend to Dr. Quine its sympathies. Seconded.

Dr. W. O. Ensign moved to amend by also extending the sympathies of the members of the Society to an ex-President, Dr. J. T. McAnally who had been present, but was now absent on account of illness.

The motion, as amended, was put and unanimously carried by a rising vote.

Dr. O. B. Will moved that the thanks of the Society be extended to Dr. Taylor, who represented Mayor Harrison, in delivering the Address of Welcome on behalf of the citizen's of Chicago; to Mr. Henry G. Foreman, President of the Board of County Commissioners; to the Northwestern University for the conveniences that have been accorded the members in this building; to the Chicago Medical Society for the interest taken in entertaining the members; to the Chicago Women's Medical Society for the many courtesies extended the visiting lady physicians; to Dr. Stowell, the very efficient Chairman of the Committee of Arrangements, and to the retiring President, Dr. Harris, for the able and impartial manner in which he had presided over the deliberations of the Society.

Seconded by Dr. Pettit, and unanimously

carried.

Dr. J. W. Pettit moved that Drs. P. M. Woodworth, of Chicago; L. C. Taylor, of Springfield, and H. C. Mitchell, of Carbondale, be elected as members of the Committee on Medical Legislation. Carried.

Dr. Pettit also moved that the same gentlemen be elected as members of the Committee on Public Policy. Carried.

On motion, the House then adjourned sine die.

May 2, 1903—General Meeting.

The general meeting was called to order at 10:10 A. M.

The Secretary read the minutes of the proceedings of the House of Delegates, which were approved as read.

Dr. James H. Stowell, Chairman of the Committee of Arrangements, made a verbal financial report. He stated that the Committee had taken in in cash for exhibits in the neighborhood of \$1,100.00, but what the actual expenses would be he did not know. The Committee had estimated that the expenses would approximate \$700.00, and that just as soon as all money could be collected that was due and the bills were gotten together, an official report could be made to the proper officers.

On motion of Dr. Kreider, the Committee was extended further time to make a complete report to the President and Secretary.

Dr. Wm. A. Evans said that Dr. I. N. Weare, of Fargo, N. D., an ex-President of the North Dakota State Medical Society, and a member of the State Board of Health, lies ill at the Chicago Hospital. He therefore moved that the Society extend its sympathy to him and best wishes for a speedy return to health. Carried.

The next order was the induction of officers.

President Harris said: If there is no further business, the Fifty-third annual session of the Illinois State Medical Society will soon be brought to a close. No one can be President of this Society without realizing and appreciating the amount of work which that office entails. If the Society has made any progress during the past year, if the profession has been brought into

closer union, if reorganization has been helped, it has been due to the hearty cooperation which the President has met on every hand; but that which will give him the greatest pleasure, and will always be recognized as more than compensation for all the work which he has done, is the confidence with which all of his efforts have been received.

It is now my pleasant duty to present the President-elect. I will ask Dr. Evans and Dr. Montgomery to escort the President-elect to the Chair. (Applause.)

Dr. Harris, the retiring President, in introducing his successor, said: It gives me great pleasure to present to you the President-elect, Dr. Carl E. Black, and in doing so I feel confident, as all of you do, that it could not have been placed in better hands, and that the work of the Society will be prosecuted with the greatest vigor for the success and benefit of the entire profession of the State. It gives me pleasure, Dr. Black, to turn over the gavel of the Illinois State Medical Society to your hands. (Applause.)

Dr. Black, in accepting the Presidency, said: Dr. Harris, I thank you. Ladies and Gentlemen of the Illinois State Medical Society. I most heartily thank you for this expression of your confidence and your compliments. I shall hope to make an effort during the coming year to do something which may deserve them.

During the past three years I have been entirely absorbed in legislative work, and it will be a great pleasure to me to get out of one narrow rut into a little broader pathway. However, I want to take this opportunity to thank the members of the Illinois State Medical Society and the members of every local society in either direct or indirect affiliation with this Society for their hearty support of the work of the Legislative Committee. I have realized in the past two or three months that we must have been a great bore to many members of the Society, with our numerous communications, numerous telegrams, and requests for assistance, which must have been on their very face an arbitrary order to do something which we had not an opportunity to explain. However, these communications were received in the

spirit in which they were sent, and I take this opportunity to thank you all for your hearty cooperation. The Committee has felt that the work of organization was really the chief work of the Committee after all, and it is hoped that our efforts will accomplish something towards preventing vicious legislation and securing legislation which the profession desires. It has been our aim to follow the wishes and views of the profession. But there have been many discouraging things. We have not been discouraged on account of the way the profession has responded to our calls, and for this we feel very grateful indeed.

Perhaps you are all interested in the Bill which is still hanging in Springfield, and which has passed the Senate and is now in the hands of the Judiciary Committee of the House. It is hoped that it will be adopted. You will remember that some resolutions were forwarded to the Governor, to the Speaker of the House of Representatives, to the Chairman of the Judiciary Committee, and to others yesterday, and in response to them the Secretary has received a telegram from Mr. Shurtleff, Chairman of the Judiciary Committee, which I will read.

"E. W. Weis, M. D.,

Secretary, Illinois State Medical Society,
Chicago.

Senate 370 will be amply considered by Judiciary Committee in sufficient time for considerate action on calendar.

(Signed.) E. D. Shurtleff."

From this telegram it would seem that the Chairman of the Judiciary Committee intends to keep the various promises to the profession, that this Bill should have a hearing before the House, and the Committee feels that if the Bill, which was passed by the Senate, goes to the House in that form, it will almost certainly pass the House, at least, we have promises to that effect. If the Bill does pass, it will be necessary for us at this time, before we adjourn, to make some provision for sending nominations to the Governor for members of the new Board which this Bill creates. Therefore, it seems proper for us this morning to devise or suggest some plan by which these nominees

might be named. Possibly the naming of the nominees might be left to a Committee or to the Councilors, or some other plan which some of you may devise by resolution.

In addition to that, there is one matter which was overlooked, and if you will pardon me, I will call your attention to it. Senate Bill 214 has passed the Senate; it was introduced by Mr. Stubblefield, and provides for an osteopath on the Board of Health. This Bill has some provisions in it that are good, but the majority are contrary to the views generally expressed by the members of the Illinois State Medical Society. It recognizes the Illinois State Osteopath Association; it recognizes osteopaths as such. I have written out a resolution which, I think, should be presented at this time by someone bearing the protest of the Society in the matter.

The resolution was read as follows:

Resolved, By the Illinois State Medical Society, now in session, that we hereby enter our protest against Senate Bill No. 214, which is designed to place an osteopath on the Illinois State Board of Health, and to give other privileges to osteopaths. Our protest is based on the fact that such a law is class legislation and unconstitutional, and for the further reason the membership of the Board of Health is not limited to any particular class, the Governor having full discretion in this matter; be it further

Resolved, That a copy of this resolution be sent to the Speaker of the House of Representatives and members of the Committee of the House to which this Bill is referred by our Secretary at once.

With these suggestions, and asking your cooperation in the year to come, I again thank you. (Applause.)

On motion of Dr. R. R. Campbell, of Chicago, the matter of sending nominations to the Governor for members of the new Board, provided the Bill passes, was left to the Board of Councilors.

Dr. George N. Kreider moved that the recommendation of Dr. Black protesting against the passage of the osteopath Bill be adopted. Seconded and carried.

There being no further business to come

before the general meeting, the Society then adjourned, to meet in Bloomington, 1904.

Edmund W. Weis,
Secretary.

Members of the House of Delegates present:

Adams County, E. B. Montgomery, Quincy, two years.

Alexander County, J. C. Sullivan, Cairo.

Bureau County, F. C. Robinson, Wyanett.

Cass County, J. G. Franken, Chandler-ville.

Chicago Medical Society for Cook County, R. R. Campbell, F. R. Green, W. A. Evans, R. B. Preble, W. S. Harpole, T. J. Sullivan, G. W. Webster, F. X. Walls and J. R. Pennington for two years; J. B. Herriek, A. E. Halstead, W. R. Livingston, C. L. Mix, C. Davison, F. Allport, W. Parsons and W. Blanchard for one year; J. C. Cook alternate for one year.

Champaign County, W. K. Newcomb, Champaign.

De Witt County, A. E. Campbell, Clinton.

Decatur Medical Society for Macon County, W. C. Bowers, Decatur.

Douglas County, J. L. Reat, Tuseola.

Edgar County, J. C. Epperson, Kansas.

Fayette County, E. W. Brooks, St. Elmo.

Fox River Valley Medical Society for Kane County, F. H. Jenks, Aurora.

Gallatin County, Geo. P. Cassidy, Shawneetown.

Greene County, H. A. Chapin, Whitehall.

Grundy County, H. M. Ferguson, Morris.

Hancock County, J. T. Jenkins, Burnside, two years.

Henderson County, E. W. Salter, Stronghurst.

Jersey County, M. B. Titterington, Jerseyville.

Jackson County, J. T. McAnally, Carbon-dale.

Kankakee County, B. F. Uran, Kankakee.

Kendall County, W. H. Hanna, Lisbon.

LaSalle County, J. W. Pettit, Ottawa.

Lake County, L. H. Tombaugh, Waukegan.

Lee County, C. C. Hunt, Dixon.

Livingston County, V. M. Daly, Pontiac.

Macoupin County, J. Palmer Matthews, Carlinville.

Marion County, A. P. Kell, Kell.

Marshall County, E. S. Everett, Lacon.

Mercer County, C. W. Carter, Aledo.

McDonough County, H. Knappenberger, Macomb.

McLean County, F. J. Parkhurst, Danvers.

Morgan County, E. F. Baker, Jacksonville.

Ogle County, J. T. Kretsinger, Leaf River.

Peoria City Medical Society for Peoria County, R. A. Kerr, Peoria.

Pike County, F. M. Crane, Pittsfield.

Rock Island County, A. M. Beal, Moline.

Sangamon County, A. L. Brittin, Athens.

Scott County, J. W. Weis, Manchester.

Stephenson County, J. H. Stealy, Freeport.

Shelby County, W. J. Eddy, Shelbyville.

St. Clair County, C. W. Lillie, East St. Louis.

Union County, J. I. Hale, Anna.

Warren County, F. E. Wallace, Monmouth.

Williamson County, H. V. Ferrell, Cartersville.

Whiteside County, Frank Anthony, Sterling.

Aesculapian Society of Wabash Valley, C. B. Johnson, Champaign.

Brainerd District Medical Society, James L. Lowrie, Lincoln.

District Medical Society of Central Illinois, F. J. Eberspacher, Pana.

Western Illinois District Medical Society, H. W. Chapman, Whitehall.

North Central Illinois Medical Society, J. A. Marshall, Pontiac; J. Whitefield Smith, Bloomington; E. H. Ochsner, Chicago.

MEMBERS OF JUDICIAL COUNCIL, CHAIRMEN OF COMMITTEES, ETC.

W. O. Ensign, Rutland; H. C. Mitchell, Carbondale; L. J. Harvey, Griggsville, J. F. Percy, Galesburg; J. L. Reat, Tuscola; C. E. Black, Jacksonville; D. W. Graham, Chicago; O. B. Will, Peoria; J. H. Stowell, Chicago; E. J. Brown, Decatur; N. S. Davis, Sr., Chicago; N. S. Davis, Jr., Chicago; C. W. Hall, Kewanee; M. L. Harris, Chicago; E. W. Weis, Ottawa.

SECTION ONE.

MINUTES.

First Day.

The Section was called to order at 9 A. M., by the Chairman, Dr. L. C. Taylor.

Dr. T. J. Pitner, of Jacksonville, delivered the opening address. He chose for his subject, "Some Points in Etiology."

Dr. A. C. Croftan, of Chicago, followed with a paper entitled, "The Dangers of an Exclusive Milk Diet in Nephritis."

The paper was discussed by Dr. R. H. Babcock.

Dr. Alfred C. Cotton, of Chicago, read a paper on "The Breast vs. The Bottle in Infant Feeding."

Discussed by Drs. I. A. Abt, Wm. G. Butler and Cotton, in closing.

Dr. E. A. Edlen followed with a paper entitled, "Psychotherapeutics."

The paper was discussed by Dr. L. Harrison Mettler.

On motion the next paper, by Dr. E. Fletcher Ingals, of Chicago, entitled, "Xanthome (or Brometone), a new Sedative; Its Therapeutic Effects in Relieving the Cough and Headache of Acute Tracheitis and in Relief of Asthma," was read by title and ordered printed in the official transactions of the Society.

Dr. James Moreau Brown, of Chicago, read a paper on "Lacunar Tonsillitis."

Dr. George E. Shambaugh, of Chicago, followed with a paper entitled, "The Distribution of Blood Vessels in the Labyrinth of the Ear, with Exhibition of Preparations and Drawings."

The paper was discussed by Dr. L. Harrison Mettler.

Dr. Hugh T. Patrick, of Chicago, contributed a paper entitled, "A Few Cases of Hysteria."

Dr. Archibald Church, of Chicago, read a paper on "The Treatment of Some of the Degenerations of the Cerebro-Spinal Apparatus, with Particular Reference to Optic Atrophy."

The discussion on this paper was participated in by Drs. L. Harrison Mettler and L. C. Taylor, and in closing, by Dr. Church.

"The Diagnosis of Chronic Delusional Insanity, with Report of Three Medico-Legal Cases" was the title of a paper read by Dr. Sanger Brown, of Chicago.

The paper was discussed by Drs. Hugh T. Patrick, J. H. Pettit, L. R. Ryan, and in closing by Dr. Brown.

On motion the section adjourned to meet on the following day at 9 A. M.

Second Day.

The Section was called to order by the by the Chairman, Dr. Taylor.

The first paper was read by Dr. Chas. L. Mix, of Chicago, entitled, "Arteriosclerosis; Its Effects Upon Brain and Kidney."

Dr. Chas. A. Elliott, of Chicago, followed with a paper on "Clinical Observations on Arterio Sclerosis."

These papers were discussed by Drs. L. Harrison Mettler, Hugh T. Patrick, Maximilian Herzog, Chas. J. Lewis, James P. Matthews, and in closing by Dr. Mix.

Dr. E. F. Snyderaker, of Chicago, followed with a paper entitled, "The Diagnosis and Treatment of Obscure Syphilitic Lesions of the Eye."

Discussed by Drs. L. Harrison Mettler and Cassius D. Westcott, and in closing by the author.

"The Presence of Seminal Elements in the Urine; Their Significance and Their Importance as a Cause of False Albuminuria," was the title of a paper contributed by Dr. Arthur R. Elliott, of Chicago.

Discussed by Drs. Frank Billings, Griffith, Chas. L. Mix, and the author, in closing.

Dr. Albert B. Hale, of Chicago, read a paper entitled, "Euphthalmin as a Mydriatic for the General Practitioner."

Dr. J. H. Stealy, of Freeport, contributed a paper on the "Barrow's Method of Formalin Intravenous Injections."

Discussed by Dr. Clark Gapen (by invitation).

On motion the section adjourned to meet on the morning of the following day at nine o'clock.

Third Day.

The Section was called to order at 9 A. M., Chairman, Dr. Taylor.

The first paper was read by Dr. C. D. Westcott, of Chicago, entitled, "The Danger That May Lurk in Blind Eyes."

The paper was discussed by Dr. L. R. Ryan and, in closing, by the author.

Dr. Edward F. Wells, of Chicago, followed with a paper on "Interstitial Nephritis; Its Diagnosis and Management."

The paper was discussed by Dr. James B. Herrick, and, in closing, by Dr. Wells.

On motion of Dr. Patrick the chair appointed the following Nominating Committee; the committee to report as soon as ready in the course of the day.

Nominating Committee: Hugh T. Patrick, James B. Herrick, T. J. Pitner, Griffith and James P. Matthews.

Dr. Julius H. Hoelscher, of Chicago, read a paper on "Original Researches Regarding Human Sweat."

The Nominating Committee through its chairman, Dr. Patrick, reported as follows: Chairman, Dr. J. W. Pettit, Ottawa; Secretary, Dr. E. B. Montgomery, Quincy.

On motion the report was received and the secretary instructed to cast the unanimous ballot of the section for the election of the nominees.

Dr. J. Holinger, of Chicago, followed with a paper entitled, "In Which Disease May we Expect Improvement of Hearing?"

Dr. Lawrence R. Ryan, of Galesburg, read a paper on "Tonsillar Hemorrhage Following Operation."

The paper was discussed by Drs. Homer M. Thomas, E. Fletcher Ingals, J. Holinger, G. P. Head, S. E. MacKellar, and Dr. Ryan, in closing.

Dr. James B. Herrick, of Chicago, contributed a paper entitled, "Abdominal Pains in Pleurisy and Pneumonia."

Discussed by Drs. Robert H. Babcock, Chas. L. Mix, Johnson, C. Gapen and in closing by the author.

Dr. James L. Lowrie, of Lincoln, considered the subject of "Pulmonary Tuberculosis and Its Home Treatment."

Discussed by Dr. Ethan Allen Gray and the author.

On motion the paper by Dr. John A. Koch, of Quincy, entitled, "The Metric System,"

was read by title and referred to the publication committee for publication.

Adjourned to meet Saturday morning at nine o'clock.

Fourth Day.

In the absence of the Chairman the Section was called to order by Dr. L. R. Ryan.

Dr. L. Harrison Mettler opened the session with a paper entitled, "Some Unusual Cases of Chorea."

The paper was discussed by Dr. J. W. Hensley.

Dr. Maximilian Herzog, of Chicago, read a paper on "Splenic Anemia and Anemia Infantum, Pseudoleukemia."

Discussed by Dr. I. A. Abt and the author in closing.

Dr. N. S. Davis, Jr., of Chicago, considered the subject of "Intestinal Antiseptics in Typhoid Fever."

Discussed by Dr. J. A. Robinson and, in closing, by the author.

Dr. John A. Robinson, of Chicago, contributed a paper entitled, "The Secondary Results of Cardiac Disease; a Unique Case."

Dr. T. A. Woodruff, of Chicago, read a paper on "Retinal Hemorrhage in Relation to Degenerations of the Circulatory Apparatus."

Dr. Rosa Engelman, of Chicago, read a paper entitled, "Coekroaches as Typhoid Infection Carriers."

On motion the section adjourned *sine die*.

SECTION TWO.

SURGERY, SURGICAL SPECIALTIES AND OBSTETRICS.

MINUTES.

Chairman, Dr. Wm. E. Schroeder, Chicago.
Secretary, Dr. Joseph B. DeLee, Chicago.

First Session, April 29, 1903.

The Section was called to order at 10 A. M., by the Chairman.

The Secretary read a letter from Dr. E. Mammen, tendering his resignation as a member of the House of Delegates, and asking that Dr. J. Whitefield Smith, of Bloomington, be appointed.

On motion, the resignation was accepted, and Dr. Smith elected a member of the House of Delegates.

Dr. J. L. Wiggins, of East St. Louis, delivered the Address of this Section. He selected for his subject, "The Renaissance."

Dr. E. B. Montgomery, of Quincy, read a paper entitled "The General Practitioner in his Relation to Early Surgical Operations," which was discussed by Dr. Edward H. Ochsner.

Dr. E. Mammen, of Bloomington, read a paper on "Spinal Injuries," which was discussed by Dr. Edward H. Ochsner, and, in closing, by the essayist.

The Secretary read an abstract of a paper by Dr. S. M. Wylie, of Paxton, entitled "The Traction Injury of Arteries."

Dr. S. R. Hopkins, of Springfield, read a paper entitled "Modern Surgery of Congenital Cleft Palate."

Dr. W. H. Maley, of Galesburg, read a paper entitled "Insanity Following Surgical Operations," which was discussed by Drs. Church and Bowes, and the discussion closed by the essayist.

Dr. Homer M. Thomas, of Chicago, read a paper entitled "A Singular Dislocation of the Metacarpophalangeal Joint Irreducible under Anesthesia."

Dr. H. W. Chapman, of Whitehall, followed with a paper entitled "Continued Development of the Fetus after Rupture of the Members and Prolapse of the Cord," which was discussed by Dr. DeLee.

Dr. Norman Kerr, of Chicago, read a paper on "Ovarian Dysmenorrhoea; Its Treatment by a New Method of Operating."

It was moved and seconded that the Section meet at 9 A. M., and adjourn at 12 M. Carried.

On motion, the Section then adjourned until 9 A. M., Thursday.

Second Session, April 30, 1903.

The Section was called to order at 9:20 A. M., by the Chairman.

Dr. J. H. Stealy, of Freeport, read a paper on "Tuberculosis of the Vestibule of the Female Genitals," which was discussed by Dr. Owsley, and the discussion closed by the essayist.

Dr. Charles S. Bacon, of Chicago, contributed a paper on "The Indications for the Tampon in Post-Partum Hemorrhage," which was discussed by Drs. Jolmes, DeLee, Kolischer, Ochsner, (Edw. H.), and the discussion closed by the essayist.

Dr. J. Clarence Webster, of Chicago, read a paper entitled "Successful Removal of a Cystic Fibromyoma of the Uterus, weighing Eighty-Seven Pounds; Twelve Inch Incision," which was discussed by Dr. Kolischer, and, in closing, by the essayist.

Dr. Gustav Kolischer, of Chicago, read a paper entitled "Operative Dysmenorrhea."

Dr. P. M. Burke, of LaSalle, read a paper entitled "The Treatment and the Causes of Death in Placenta Previa," which was discussed by Drs. Bacon, Holmes, Webster, Nelson, Kolischer, Phillips, and the discussion closed by the essayist.

Dr. Emil Ries, of Chicago, read a paper entitled "A Simple Method of Appendectomy," which was discussed by Drs. Carl Beck, O'Byrne, McCullough, Sutton, and, in closing, by the essayist.

Dr. W. P. Davidson, of Sullivan, read a paper on "The Curette in Puerperal and Non-Puerperal Cases," which was discussed by Drs. Holmes, Kolischer, DeLee, Atkinson, and the discussion closed by the essayist.

On motion, the Section adjourned until Friday, at 9 A. M.

Third Session, May 1, 1903.

The Section was called to order by the Chairman, at 9:25 A. M.

Dr. James F. Percy, of Galesburg, read a paper on "Dislocation of the Astragalus."

Dr. G. Frank Lydston, of Chicago, read a paper on "The Indications, Limitations and Technique of Prostatectomy," which was discussed by Drs. Mammen, McCullough, and the discussion closed by the essayist.

Dr. E. M. Sutton, of Peoria, was elected Chairman of the Section for the ensuing year, and Dr. Rudolph W. Holmes, of Chicago, Secretary.

Dr. E. L. Moorhead, of Chicago, reported "A Case of Multilocular Cystoma of the Ovary," and exhibited the patient.

Dr. L. E. Schmidt, of Chicago, followed

with a paper on "Vibratory Massage in Diseases of the Prostate Gland."

Dr. E. A. Fischkin, of Chicago, read a paper on "Pemphigus."

Dr. Joseph B. Bacon, of Macomb, read a paper on "Gastrostomy," which was discussed by Drs. Ochsner (A. J.), Kolischer, Bouffleur, and the discussion closed by the essayist.

Dr. E. V. D. Morris, of Galesburg, read a paper on "Accidents of the Antrum, with Special Reference to a Peculiar Case," which was discussed by Dr. A. J. Ochsner.

Dr. Henry Gradle, of Chicago, followed with a paper on "Treatment of Injuries to the Eye."

Dr. J. Whitefield Smith, of Bloomington, read a paper on "The Surgical Treatment of the Trachoma, with Report of Cases."

Dr. H. A. Brennecke, of Aurora, read a paper entitled "Cases Simulating Appendicitis."

Dr. Willis O. Nance, of Chicago, contributed a paper on "The Management of Crossed Eyes in Children."

On motion, the Section was adjourned.

Fourth Session, May 2, 1903.

The Section was called to order by the Chairman at 9:25 A. M.

Dr. Carl E. Black, of Jacksonville, read a paper on "Hernia, Strangulated; Operation; Resection of the Gut; Removal of Ovary, Tube and Appendix."

Dr. Chas. M. Robertson, of Chicago, read a paper on "Hypertrophic Rhinitis."

Dr. J. E. Coleman, of Canton, read a paper on "The Surgeon's Responsibility."

Dr. T. J. Watkins, of Chicago, contributed a paper entitled "Notes on the Treatment of Puerperal Infections," which was discussed by Drs. Maley, Paddock, Kolischer, Bacon, Ries, Eisendrath, Hale, and, in closing, by the essayist.

On motion, the Section then adjourned sine die.

SECTION THREE.

First Day, Wednesday, A. M.

The Section was called to order by the Chairman shortly after 10 o'clock.

The Chairman: Our first paper this morning is one by Dr. Adolph Gehrmann,

of Chicago, on, "Some Observations on Iodophilia."

See page 13, Vol. V.

The Chairman: We will now listen to a paper by Dr. R. H. Main, of Barry, Ill., entitled, "On the Toxicity of Methyl Alcohol in Extracts and Medicines."

The Chairman: The next paper is one by Dr. W. J. Class, of Chicago, on "The Diploecoccus Scarlatinae."

Dr. Class then read his paper.

The Chairman: We will now listen to a paper by Dr. O. B. Will, of Peoria, on "Educational Influences and Opportunities of our Civil Courts, from a Medical Standpoint."

The Chairman: Our next paper will be one by Dr. Hekoten, of Chicago, on "The Practical and Scientific Value of Bacteriological Examinations of the Blood during Life."

An adjournment was then taken until Thursday, April 30, 1903, at 9 A. M., at which time the reading of the papers and discussions thereof will be resumed.

SECTION THREE.

Second Day, Thursday, A. M.

The Section was called to order shortly after 9 o'clock by the Chairman.

Dr. W. J. Fernald, of Frankfort, Ind., contributed a paper upon "A Sociological View of Criminal Abortion," which was received with applause.

Dr. H. C. Jones, of Deatur, Ill., then presented a paper upon "The Legal Status of the Doctor," which aroused much interest.

The Chairman then announced that the next paper to be read would be that of Professor A. N. Talbot of the University of Illinois, entitled "Sewage Disposal for Inland Towns."

The meeting was brought to a close by the presentation of an interesting specimen obtained by Dr. Baum, of Chicago. The history of the case, as outlined by the doctor, is as follows:

The Chairman: Gentlemen, that closes the work of the Section. The papers are all in, and I want to thank you for your assistance.

On motion the Section then adjourned sine die.

New Incorporations.

Kenilworth Sanitarium, Kenilworth; capital, \$25,000; object, conduct a sanitarium; incorporators, Sanger Brown, Frederick A. Brown, James S. Wight.

Union Medical Supply Company, Chicago; capital, \$2,500; object, chemists, druggists, and proprietary medicine manufacturers; incorporators, G. V. Estray, A. L. Ringo, Winifred A. Estray.

S. F. Hart Medicine Company, East St. Louis; capital, \$50,000; object, manufacturing medicines; incorporators, S. F. Hart, Martha Hart and J. Otis Hart.

Chicago and Cook County Osteopathic Society, Chicago; discussion of medical science; incorporators, James W. Cecil, George Heldon, George J. Munroe.

D. O. Medical Company, La Grange; capital, \$25,000; object, manufacturing medicines, drugs, and chemicals; incorporators, Eber H. Devoe, William S. Hay, Henry J. Barr.

Puritan Medicine Company, Chicago; capital, \$150,000; object, manufacturing proprietary medicines; incorporators, R. B. Gordon, C. A. Wickoff, R. B. Lanfare.

St. Joe Medical Missionary Society, Chicago; promotion of the spiritual welfare of medical students; incorporators, Samuel H. Pye, Marcus P. Hatfield, Alan A. Gilbert.

McNamara Dental Company, Chicago; capital, \$2,500; furnish dental services; incorporators, Anna M. McNamara, Elizabeth Koll, P. R. Boylan.

A PAGE FOR DOCTORS.

WANTED AND FOR SALE ADVERTISEMENTS.

In the future, one page will be devoted to want and for sale notices for Physicians. If you have a practice for sale, or would like an assistant or a partner, advertise it in our columns.

Or perhaps you would like to buy or sell an X-Ray outfit or some other Physician's Appliances. If you have anything under the sun that you want to buy or sell pertaining to the practice of medicine, advertise it in these columns and it will be sent to the 4,357 readers of this Journal.

RATES.

Three Cents per word. Count each set of figures as a word also each letter used singly, such as "A book." The letter "A" is counted as a word. When answers are sent in care of the Journal, add three words for address. All letters received will be promptly forwarded to parties for whom intended.

Display advertisements under this heading will be charged five cents per word.

The cash must accompany all orders for space under this head. No advertisement taken for less than fifty cents.

Address, ILLINOIS MEDICAL JOURNAL,
Springfield, Ill.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Cathoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—A. S. Wall, M. D., Champaign.
Christian County—W. T. Bridges, M. D., Stonington.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
DeWitt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—Geo. P. Cassidy, M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. N. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. G. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—R. E. Lewis, M. D., Macomb.
McLean County—E. S. Reedy, M. D., Bloomington.
Macon County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackey, M. D., Aledo.
Montgomery County—G. A. Clotfelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.
Pope County—W. S. Dixon, M. D., Rosebud.

Pulaski County—A. W. Farr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. R. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—A. W. Ball, M. D., Rushville.
Scott County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermilion County—E. E. Clark, M. D., Danville.
Wabash County—G. C. Kingsbury, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marion.
Winnebago County—S. R. Catlin, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyler, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
Aux Plaines Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynæcological—R. W. Holmes, M. D.
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Lodor, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—L. H. Mettler, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tivnen, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.
The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

JULY, 1903.

INDEX FOR VOLUME FOUR.

The index for volume four which is mailed to members receiving that volume will be found unusually complete. We are indebted to President Black for its compilation. President Black by the way, will have charge of the Journal during the absence of the editor on a vacation trip. All reports of societies, etc., may be sent to the editorial office as usual.

LESSONS OF THE FLOOD.

The unprecedented rainfall of recent weeks has resulted in floods, along the western border of the state, rising at least four feet higher than ever before known. These floods have been the cause of a great amount of suffering, extensive property losses and a certain number of deaths by drowning and exposure. No doubt our brother physicians in E. St. Louis and vicinity have suffered

great losses and to them we extend the sympathies of their colleagues throughout the state.

Another phase of this subject demands consideration. It is a fact that a large part of E. St. Louis and practically all of Granite City, Venice and Madison were built on ground which was far below the danger line of the river and that they have been in peril for years because of inadequate levee protection. Instead of securing ample protection and then building, these communities, housing more than 50,000 souls, have gone on expanding, regardless of the treacherous river at their very doors.

The river in 1844 reached nearly its present mark. This alone should have been sufficient warning but in addition there have been in the past 25 years other factors at work to still farther increase the dangers. All the streams tributary to the Mississippi have been relieved of obstructions and have been leveed. The farms have been tiled and swamps have been drained into the rivers so that the rainfall seeks the water courses as rapidly as it falls. Again a part of the waters of Lake Michigan, amounting to millions of cubic feet each day, is poured into the "father of waters" through the drainage canal and the Illinois river. All these causes combine in a rainy season to create an inland sea.

It appears to us that human foresight should have been great enough to foresee this and provide against the destruction which has been long withheld. We hope that our legislature will take the first opportunity to forbid the erection of dwellings on areas which are not only protected against the flood lines of the past, but against any increasing perils of this character which may arise in the future.

THE CHICAGO DRAINAGE CANAL.

For many years this stupendous piece of engineering and expense has been a bugaboo about which it has seemingly been a sort of crime to say anything, no matter how truthful, in the way of criticism. Although tempted to call attention to the matter when the report of the State Board of Health was

published we refrained from doing so, fearing that our statements might be considered partisan and further because the subject has been, for many years, a sort of *noli me tangere*.

It was only when the Physicians' Club of Chicago, took up the matter and listened to the critical remarks of such authorities as Jordan, Long, Gehrmann, Billings, Bacon and many others that we ventured to make some statements regarding the water supply of Chicago. The general trend of the discussion at this meeting was very emphatically against the success of the canal as a purifier of the water supply of Chicago. Absolutely nothing was said in this meeting, as reported, nor in the editorial columns of this Journal concerning the effect of the drainage canal on the waters of the Illinois and Mississippi rivers. As far as we were concerned, there was no intention of discussing matters affecting the suit brought by St. Louis and we believe an honest reading will fail to show any such possible construction of the language. Great was our surprise therefore when we recently received from Commissioner Reynolds of Chicago, an excellent "report of streams examinations, sanitary District of Chicago," and with it a circular letter laying the onus of its publication on the "recent editorial attacks upon the work of the Sanitary District published in two medical periodicals. The Journal of the A. M. A., Chicago, and the Illinois Medical Journal, Springfield, (which) have gained such currency as to beget a widespread distrust, which, it is feared, may prejudice the decision of the suit if the facts be not forthwith presented to the public." The suit, as is well-known, is the one which has been brought by "the city of St. Louis for a Federal injunction against the further operation and development of the main drainage channel of the Chicago Sanitary District on the ground that such operation and development are or will be injurious to the water supply of St. Louis." The volume issued by Commissioner Reynolds contains nearly 350 pages and like the similar volume issued two years ago, by the State Board of Health, goes to show

that the more sewage poured into a stream of running water the purer said stream is likely to become. In proof of this paradox it is stated in both reports that the water of the Illinois river bearing the sewage of a large part of Chicago and the cities on the river further down is purer at the mouth of the Illinois than the water of the Mississippi just above this point. The water of the great Mississippi at this point could not possibly bear the sewage of more than one-fifth of the population that the small Illinois bears.

However, all this aside we are, on general principles of the Golden rule opposed to criticism of Chicago for pouring its sewage into the Illinois. St. Louis and every other city which has sought to make trouble for our great city is guilty of the same sanitary sin since they pour their untreated sewage into the nearest stream regardless of the effect which it may have on the health of the communities below them. In her troubles, of this character Chicago really more deserves sympathy than criticism. No one doubts that an honest effort has been made to secure a pure water for her own use and at the same time render her sewage innocuous to the people past whose doors it flows. According to the reports of experts in the publications just mentioned she has succeeded in the second part of her task.

As regards securing a pure water supply for Chicago herself the relief seems far off. The epidemics of 1901 and 1902 were serious but thus far in 1903 the death rate from typhoid fever, as reported by the health department, has exceeded the death rate of the earlier years. So long as the mortality from this preventable disease remains so great as it now is, Chicago may expect deserved criticism on the character of its water supply. It may expect that people will journey to the metropolis as infrequently as possible and will make their sojourn as short as possible because they have a well grounded fear that there is danger in using the water. Furthermore there are scores and hundreds of physicians who can testify that "the city of Chicago continues to be a center for dissemination

of typhoid bacilli to all parts of the surrounding country."

The statements made in the reports of Commissioner Reynolds and Secretary Egan will have an important and beneficial influence we hope in the decision of the suit brought by St. Louis, but there is really very little in either of them encouraging to the people of Chicago itself. We fear they are destined to continue to sacrifice their lives by typhoid until some better means is provided to supply them with pure water.

Since the above was written the Chicago Health Dept. has started an investigation of the feasibility of sterilizing the lake water by the ozone process thus virtually acknowledging the truth of our statements.

ROBERT BOAL.

Our venerable brother and distinguished colleague, Robert Boal, one of the founders, in 1850, of the State Medical Society, passed away, June 12, at the home of his daughter in Lacon. Although Dr. Boal had reached an extreme old age, being in his 91th year, and had not engaged in practice for more than 10 years, we have seen him carried to the grave with great regret. Men like Boal appear but seldom in the profession. He was small in stature but great in every other capacity and has left a mark on the medical and civil history of his adopted state which can never be erased. It was a privilege to have known him and a delight to have heard him tell of his experiences in the 30's when he located in Illinois and traversed the prairies and forded its streams in the pursuit of his chosen profession. Who can forget the story of the journey which he made in 1850 to Springfield to assist in the formation of the State Society. What a treat it was to hear him and the venerable Davis spat across the banquet table at the Springfield semi-centennial meeting as to which one had practiced medicine the longest, the record then being about two years to the advantage of Boal, he having seen 68 years of active practice. What a satisfaction it is to us to review his political history. He was indeed the honorable Doctor Boal. He served as

state senator and trustee for seventeen years of the institution for the deaf and dumb. This was the time and he was the kind of man to serve the state on a board of trustees for the good of the people. Then there was no talk of political "machines" or of "grafting." No one who ever knew Dr. Boal could imagine him doing other than the right thing. His long and useful career has been an inspiration and a blessing. May his virtues remain deeply graven in our hearts and his name live forever in the annals of the Illinois State Medical Society.

MORTALITY STATISTICS OF ILLINOIS CITIES FOR MAY, 1903.

	Popu- lation.	Death Rate.	Diph- theria.	Scarlet Fever.	Measles	Small- pox.	Typhoid Fever.
Chicago	1,885,000	16.69	41	42	62	7	26
Springfield..	40,000	10.20	1	0	0	0	0
Jacksonville.	16,000	9.50	0	0	0	0	1
.....

The health commissioners of Chicago makes the following remarks about filters:

The presence of so much clay and sediment in the city water is driving many people to the use of filters, and the advice of the Department is so frequently asked that an official statement seems advisable.

It is beyond the facilities of the Municipal Laboratory to test domestic filters. The two requisites of a filter are that it shall be properly constructed, and that it may be easily cleaned and sterilized. Filters made so that the water passes through unglazed porcelain or stone of proper fineness will prevent disease germs from passing through with the water.

However, the germs grow through in time by growing from space to space, and not only fill the porous stone, but also grow on the inside. Specimens of water from some of the best filter plants in the city have been sent to the laboratory, and showed bacteria in great numbers. Investigation showed that these plants had been installed and the water was of good quality for a time; the companies had received their payment but no provision was made for sterilizing the filter itself.

No filter is worth a rap that is not properly cared for.

OPINIONS OF ILLINOIS EDITORS.

It is always a good policy to hear what the other side has to say. Last month we

gave Gov. Yates' reasons for vetoing the trained nurse and dental bills. Below we give as many newspaper comments as have come to our notice. Some of them are "weighty" and all of them are worth reading:

Springfield Register: Governor Yates did right in vetoing the "trained nurse bill." There is entirely too much supervision over the people now for their safety. The law should leave the people as free as possible to look after their own interests. When a person needs a nurse the doctor should not be required to find one "with a stamp on" before he can employ a nurse to save his patient's life.

Peoria Star: Governor Yates has done the state good service in vetoing a number of idiotic bills which the legislature passed. He has put his official seal of condemnation to the nurses' bill, which provided for the examination, registration and licensing of trained nurses by the board of health. Of course every trained nurse would be obliged to pay a registration fee which would go into the pockets of the board. Now let the governor pursue the same course with the dental bill and we shall have two evils removed which the legislature sought to fasten upon us.

Champaign Gazette: Governor Yates has vetoed the bill requiring the examination and licensing of professional nurses. This action ought to meet public approval. There is a curious tendency to the restriction of all kinds of employment, and this tendency does not contribute to the general efficiency of the people in useful acquirements. The nurses' bill was but another addition to the list which is already too long. Skilled nurses will be plentiful enough, and the number could profitably be tailed out by more devotion to the subject of nursing by the members of the family. Especially should every woman make a study of nursing to such an extent as to be ready, quick and efficient in that duty in all ordinary cases. With this important qualification, which every well-equipped woman should have, the state need not interfere especially with the matter of nursing the sick. It is a folly and a wrong for the state to be perpetually interfering with affairs which the people in their individual capacities can take care of well, and be individually the better therefor.

White Hall Republican: Governor Yates has vetoed items aggregating nearly \$1,000,000 in appropriation bills. He has saved the state an immense sum by the exercise of his prerogative, and for this is to be commended. There is, however, a difference of opinion as to the merit of his disapproval of the embalmer's bill and the dental bill. His reason for his action in both cases is that they provide for the selection by societies of a majority of the board. He holds that such selection should be made by state officers. Both bills were intended to protect the public from being imposed upon by incompetents, and some means should be devised to give effect to their intent.

State Items.

W. E. Shastid of Pittsfield has resumed practice after a trip to Europe.

Mr. and Mrs. Elias Lyman of Kewanee have given real estate valued at \$10,000 for a site for a new hospital of the Sisters of St. Francis, to cost about \$50,000.

Charles B. Taylor, of Elkhart, has been appointed superintendent of the asylum for feeble-minded children. There were two aspirants for the position, former Superintendent W. L. Athon, of Marshall, and the Logan county man. Dr. Taylor was assistant superintendent under the late Dr. S. H. McLean, and at his death Governor Yates requested Dr. Taylor to act as the head of the institution until he could decide on a definite appointment. The appointment has been expected for some time past and does not cause any surprise in political circles, for it was known that the successful aspirant had influential backing and was familiar with the institution since the death of the late superintendent.

Postoffice inspectors are collecting more evidence against the Christian hospital, 617 LaSalle avenue, Chicago, by which they hope to have the department at Washington issue an order prohibiting the delivery of mail to that institution.

"We have secured the names of several more physicians," said Inspector Holmes, "who have sent money for the 'certificates' issued by the hospital. These names and other evidence we will send to Washington."

Dr. John B. Murphy denies he visited the hospital, as stated by N. E. Wood, the head of the institution.

"Not only have I never visited the institution," said Dr. Murphy, "but so far as I know I never have seen Dr. Wood or Dr. Arthur C. Pobert."

During the day Dr. Murphy received from the Chicago inspection bureau a Bertillon identification card bearing the picture, in convict's garb, of an A. C. Pobert, formerly a banker, who served a sentence in the Wisconsin penitentiary for embezzlement. Dr. Pobert could not be found yesterday, but Mrs. N. E. Wood denied he had been in prison, but admitted that at one time he was connected with seven Wisconsin banks.

Dr. Evans, president of the Chicago Medical society, received from a Hammond (Ind.) physician a copy of a certificate from the Christian hospital. It bore the signature, John Murphy, M. D., M. S., in ink, there evidently having been an attempt to imitate the signature of Dr. John B. Murphy.

Dr. Gustaf Adolph Walther, Chicago, who disappeared eight months ago after being indicted for assaulting Ethel Berkland, 10 years old, has been located at Tegucigalpa, Honduras, where he is said to be a candidate for public office.

As there is no agreement between this country and Honduras as to the turning over of fugitives, he cannot be brought back.

A practitioner in one of the prosperous smaller cities of the state makes the following startling announcement in the press. We give it verbatim et literatim:

X-Ray, Hot air and Electro-Therapeutic Office.

* For the treatment

By dry, super heated air, electricity, X-Ray, massage, medicines, etc., of acute and chronic rheumatism, sciatica, neuralgia, paralysis, cancer, diseases of the nervous system, stomach troubles, diseases of women and all pathological conditions which may be cured or benefited by these modern methods of treatment. Office and residence southeast corner square.

At its recent annual meeting President O. B. Blackman of the Illinois Homeopathic Medical Association said:

"The fact that many of the best teachers in the allopathic schools are today using the single remedy should encourage us to believe that now the two schools are, indeed, getting closer together. If assimilation means the general right to practice medicine according to the dictation of our own sense of right and wrong, and in accordance with the law which we believe to be immutable, then we are ready to meet them half way."

Correspondence schools which teach the profession of nursing the sick were severely criticised yesterday at the closing session of the Illinois State Association of Graduate Nurses in Schiller hall. Mrs. E. B. Hutchinson led the attack on these schools, and added that the only way to acquire the necessary knowledge and experience was by hospital training.

New Child Labor Law.

The operation of the new child labor law which goes into effect on July 1 will mean a loss of business to many notaries public, who have been making out affidavits of age for children between 14 and 16 years of age. The new law gives to the Board of Education the sole authority to issue such affidavits, and relieves the applicant of the payment of the fee of 25 cents charged by the notary.

This feature of the law will be enforced from the day it goes into effect, even though the state factory inspectors may allow employers some time to become familiar with the provisions of the new law before prosecuting them for violations of its other provisions.

Heretofore the statement of the parent or guardian of the child was a sufficient basis for an affidavit of age, and it has been charged by Edgar T. Davies, state factory inspector, and Superintendent Bodine of the compulsory education department of the Board of Education, that notaries have been known to prepare affidavits in blank and to furnish them to parents to be filled out as needed.

Ways to Defeat Deception.

Under the new law the school records will be taken first as evidence of age, on the theory

that there would be no incentive to the parent to falsify the age of a child entering school. The county registration of birth and baptismal certificates also will be considered. In the absence of any record parents will be required to go before the county or juvenile court and make oath to the age of children.

There is a disposition on the part of Mr. Davies to educate employers into obedience of the new law rather than to coerce them into it. To this end, he has ordered printed thousands of copies of the law for distribution among employers of children.

"The new law includes so much and is so different from the old law that I believe I will be justified in giving employers some time to get an understanding of it," said Mr. Davies. "What I hope to do is to get employers to see the virtue of the law, so that they will willingly obey it rather than to be compelled to force them by continuous prosecutions."

Local Societies.

The Chicago Surgical Society held a regular meeting April 6, 1903, with the President, John B. Murphy, in the chair.

Arthur Dean Bevan presented a case of ligation of the common carotid artery for aneurysm.

L. L. McArthur presented a paper on **Blood Examinations in their Relation to Surgical Procedures.**

He stated that in especially three particulars much aid to the surgeon may be had by a blood examination, namely, first, by the hemoglobin content; second, by leucocyte decrease, and, third, by leucocyte increase (polymorphonuclear and mononuclear). Hemoglobin percentage reduction occurs in various diseases, neoplasms and conditions for which surgical interference is often the only remedy. In the last few years it has been clinically demonstrated that there is a limit beyond which it is almost fatal to go, and as more and more evidence accumulates this low limit is found to lie between forty per cent and fifty per cent. Below this the fatality of immediate interference rises most emphatically, so that some good authorities refuse interference when below thirty per cent, unless instantly imperative. He has learned in this regard, however, to differentiate between a temporary sudden hemoglobinemia and those forms of gradual diminution, such as intestinal or stomach ulcers, hemorrhoids, uterine fibroids, or bleeding carcinomata may bring on. Take, for example, those induced by an extra-uterine hemorrhage. Here the hemoglobin contents may sink to 18 or 20 per cent, and yet prompt interference will be well borne by the patient, since the blood-making capacity has not been impaired, overworked, or destroyed by preceding diseases or losses. Only a brief tiding over with transfusions, infusions, and stimulating enemata is necessary, while these identical efforts fail to restore those of the former class. There seems to be ground for the belief that the general anesthetic is an

important detrimental factor in the increased mortality, and the deduction is made that, where feasible, local anesthesia (Schleich) should be used.

Leucocytes decrease (from the normal 6500) with certain diseases, the number of which is quite limited (e. g., malaria, tuberculosis, measles), and among which typhoid fever is most often observed, there is a reduction far below the normal, of the white blood corpuscles. Here, not infrequently, a blood examination will solve a difficult surgical problem. The author related a case in point.

He called attention to the fact that certain drugs or a starvation diet may reduce greatly the leucocyte count, and urged here, as elsewhere, that the blood findings are only to be considered as a single factor in the sum-total which go to the making of a final diagnosis, and should never outweigh definite positive clinical knowledge. He recently removed an appendix from a patient whose blood count on three occasions was 4200, 4400, 4500, because all the classical symptoms were there, and only later discovered that the patient had been taking for a week enormous doses of a headache remedy, with absolute starvation diet—water only.

Again, the surgeon may gain valuable aid and information through those increases in the number of the white bodies of the blood now so often observed, provided a correct interpretation be made of their significance. The evidence is enormous and constantly accumulating, which demonstrates the relationship between infectious inflammatory processes and the increase in the multinuclear neutrophile leucocytes. In like manner the number of mononuclear leucocytes in uncomplicated neoplasms is often observed. While Donati's careful studies of the blood of 37 cases of neoplasms show that there is no specific type of blood for neoplasms, they also show that the differential count indicates changes in the number, form and peculiarities of the cellular elements, both red and white, that much information can be gained in uncomplicated cases.

In abdominal inflammations in particular can it be said that a study of the changes in the blood has proven of most aid. For the year 1901 Woehnert calls attention to the fact that in those cases of appendicitis in which the white blood count ran above twenty thousand, pus was found. It is stated that in the non-suppurative variety of appendicitis, over twenty thousand count is not seen. It has been said that with this variety of infection more than any other intra-abdominal lesion is the leucocytes count highest and neutrophilic, perhaps because of the mixed type. When within twenty-four hours 18,000 is exceeded, one can usually be sure of a severe type of infection, and with stationary or increasing severity of the clinical symptoms, operation will be justified. Again, with mild clinical symptoms, but steady and rapid rise in the count, the hint is furnished of progressing disease. In the later stages a marked drop in a very high leucocyte count, without a corresponding improvement in the clinical symptoms, may be interpreted as increased severity in the condition, for finally the very toxins which in

smaller amount call for the increase may in larger amount overwhelm the system, producing leucocytes.

In the author's limited experience, those causes inducing leucocytosis in the child do so to a higher degree and more quickly than in the adult.

In conclusion, he explained with Biernacki, "It is as great a surgical sin to omit the examination of the blood in appropriate cases, as failure in cases of general edema to examine the urine." Hemo-diagnosis must in the future be a part, never the whole, of every carefully studied case, and if at times we are unable to interpret correctly these changes, we will be at others well rewarded for having not neglected this instrument of precision at our command, the blood counter of Zeiss or Breuer.

John E. Owens presented a paper entitled **Fractures of the Vertebrae.**

After going quite exhaustively into the literature of the subject, the author submitted the following conclusions, which he thinks are reasonable:

1. Laminectomy is superior to a simple reduction of the deformity, since in fractures of the arches, reduction has no certain effect upon isolated fragments, and reduction alone has hastened death.

2. Reduction may be more rational when effected through the open wound of laminectomy.

3. Simple reduction is useless where there are clots or adhesions sufficient in themselves to account for the spinal disturbance.

4. In cases of cervical luxation, without fracture, simple reduction has given good results.

5. It is possible to still further improve the prognosis of reduction in simple cervical luxations by making the reduction with the arches exposed and employing silver wire suture of the processes to prevent relapse.

In consideration of the distressing prognosis in lesions of the cervical region, the author says that an operation appears to be strongly indicated. Degeneration is observed whenever the narrowing factor is not removed. The treatment of vertebral fractures, without operation, offers a chance of success only where there exists little or no disturbance of the spinal cord, such as paralysis of a single group of muscles, one-sided paralysis, or partial disturbances of sensibility, etc. In all cases where the usual assemblage of symptoms indicate a severe alteration of the cord, only prompt operations directly afford the best chances of securing improvement or cure.

It is Dr. Mayer's opinion (*Annals of Surgery*, Vol. XXVI, Aug. 1897, p 218) that upon the evidence of statistics of recent years an operation is justified, no matter how doubtful the case may appear. While the operation is essentially experimental, and its results problematical, the striking cures accomplished within recent years should spur surgeons on to the performance of an operation.

E. Wyllys Andrews said he had made numerous operations to elevate the fragments or to perform laminectomy in cases of recent fractures, and after having met with discouragement

he had drifted away from this practice, and personally had never had a successful result, although he had seen and treated a good many cases. In at least two instances of recent fracture of the spine he cut down and found about two inches of the spinal canal absolutely empty; there were not even the meninges present, but simply an empty bony canal. He had seen a number of patients with fractures of the cervical vertebrae live from one day to a week or more, and, in two of them, when reduction was made by pulling on the head, there was relief of symptoms almost instantly. This relief could be maintained very much better by keeping up weight and pulley extension than by any other method; and while in several of these cases the temperature and pulse were good, and vital functions were well maintained, not a single one of them was relieved permanently, or lived more than a short time. He believes that some of the so-called cures by operations may have been cases which would have recovered without it.

M. L. Harris said that his experience in operating on fractures of the spine had been as discouraging as that of other surgeons. He had operated four times, three times in the past year; three of them had fractures of the cervical vertebrae, and one a fracture of the lower dorsal. They all belonged to the class of immediate operations. One was operated within twenty-four hours, two within forty-eight hours, and one within four or five days. In all of them the cord was completely crushed. In the case involving the dorsal region, there were fully two and a half inches in which the cord was absolutely crushed. The three cervical cases died very soon; one of them lived a little longer than forty-eight hours. The case of dorsal fracture lived for some time—in fact, he did not know how long the patient did live. If surgeons could find cases in which the symptoms were due to blood clot or to displacement of fragments, they might give relief by early operation, but the results of operations in other instances, with crushing of the cord, were unfavorable, unless continuity was restored.

William E. Morgan thought it was safe to wait in cases where there was not very marked trophic disturbance, and even then one had to take chances. It was impossible to say how much of the cord was lacerated. He would not favor waiting in any case after trophic disturbance had occurred. As soon as slight necrosis of any point under pressure was noted, he would advise trying at least laminectomy, in the hope of saving, once in a while, a case.

John B. Murphy said he had come to some positive conclusions as to when to operate, and when not to operate, in cases of fracture of the spine. He had found after operation had been performed in many cases where there had been complete and immediate transverse paralysis, not a single case improved after operation. Where there was partial paralysis of sensation and of motion, remaining for a short distance below the transverse line, the cord had not been completely cut at that point, and in those cases alone was there some improvement following operative intervention. He reported several interesting cases.

The conclusions he had reached were that

where there was primary complete transverse paralysis, operation did no good. Where there was irregular paralysis, the great majority of cases he had seen eventually recovered without operation. At the present time, if the paralysis was due to hemorrhage, it could be relieved by spinal puncture if the patient was seen at once.

Dr. Owens, in closing the discussion, said that some cases he had observed were curious. He recalled a patient, whom he sees occasionally, who jumped from an engine and worked as a fireman for two weeks after sustaining an injury. At the end of that time he had ptosis and paralysis of motion and sensation in the lower extremities. He saw the case quite early a number of times. There was no deviation whatever of the spinous processes of the vertebrae; but now the man had a perceptible deformity of the dorsal region. The injury occurred about a year ago. It was singular that a man, apparently injured as he was, could perform his laborious duties as fireman for two weeks after the injury, yet such was the case. The patient had not recovered from his paralysis, and had not improved under treatment. He cited other cases.

He had seen a few skiagraphs which gave useful information in early cases.

The Chicago Surgical Society held a regular meeting June 1, 1903, with the President, John B. Murphy, in the Chair.

John B. Deaver, of Philadelphia, Pennsylvania, read a paper (by invitation) on **The Treatment of the Complications Attendant Upon Chronic Gall Stone Disease.**

In acute obstruction of the common duct, operation is not to be thought of until increasing jaundice or a period of chronicity, with fever and rapid pulse, indicate the need of such interference. Chronic gall stone obstruction, either with its increasing jaundice or the intermittent form, has called for surgical intervention, because of the liability of such stones to cause strictures, ulceration, fistulae or damage to the pancreas and to aid in the production of supuration of the liver ducts, when infection becomes superadded. As infection of a varying degree is practically always associated with the formation of gall stones, and as such infection is surely accompanied by a catarrhal condition of the mucous membrane of the common duct, the presence of a calculus, even if not sufficient in size to produce jaundice, will impair the drainage of the duct, and induce a train of symptoms causing chronic invalidism.

The preparation for a gall stone operation differs in no wise from that for any other, except in the presence of jaundice, when calcium chloride may be administered for three or four days previous to operation, in doses of twenty to thirty grains, three times a day. The use of a sand pillow is a useful adjunct in order to arch the spinal column and give a better exposure to the gall bladder region. The author usually has it placed somewhat below the liver level, which is the point recommended by Mayo Robson and places the table in a slight Trendelenburg position, three or four inches.

As to the incision, he fails to see any advantage in that made by Kehr; it is not only un-

necessarily long, but by dividing two-thirds of the rectus muscle must certainly predispose toward hernia. The incision originated by Mayo Robson gives a perfectly satisfactory exposure of the field of operation, and by splitting the rectus muscle instead of dividing it, will insure a much stronger abdominal wall. After opening the peritoneum and inspecting the field of operation, the intestines are best kept out of the way by a few, well placed gauze pads, and over these several flat marine sponges. He uses the latter because, in spite of all precautions, some bile occasionally "spills" and the sponges soak up the fluid better and more quickly than gauze. In disposing of the gauze and sponges particular care must be given to the subhepatic space, and the region above and below the gastro-hepatic omentum. The retention of purulent products in any of these fossae may give rise to serious consequences later. He hardly believes that Kehr's method of performing hepato-pexy by stitching the liver to the posterior parietal peritoneum is necessary.

The preparation of the field of operation calls for the expenditure of some time and attention to detail. He would no more think of cutting adhesions or searching for a stone without having protected the general peritoneal cavity, than he would rupture a periappendiceal abscess in the absence of adequate gauze protection to the intestines. Adhesions should then be dealt with, and while in some cases a few ligatures and the use of the finger and scissors would be sufficient, in others the most extensive and careful dissections will be called for. Every band of adhesion should be carefully tied and divided, and in the separation of those of a more voluminous nature bleeding should be guarded against by the closest scrutiny. After freeing the adhesions, the gall bladder becomes exposed and the right free border of the gastro-hepatic omentum is traced to the duodenum. The gall bladder holds the same relation to the common duct that the anterior longitudinal band does to the appendix, and the exposure of the gall bladder and the free border of the omentum is the exposure of the field of the common duct.

A nice question may arise to be decided when a dilated and displaced stomach due to pericholecystic adhesions has caused marked gastro-intestinal symptoms. The great advances and the brilliant results of a gastroenterostomy may well cause an operator to pause and consider whether he can successfully break up all constricting bands and prevent their recurrence, whereas a gastroenterostomy in addition may cause complete relief of the symptoms. Personally, he believes one should be governed by the circumstances of each case; the risk of opening the stomach and intestine is not absolutely nil, and the necessity of avoiding peristalsis for some hours after operation would perhaps cause extensive readherence of all raw surfaces.

Fistulae require great caution in their management, in order to avoid soiling the peritoneum with bowel contents by inadvertently opening the intestine when cutting a supposed adhesion. These cases call for the expert use of the needle and thread, and require the operator

to be the master of all situations and emergencies.

From a report up to 1897, which Dr. Murphy furnished to Mayo Robson, cholecystoduodenostomy had been performed with the aid of the anastomosis button in 67 non-malignant cases, with only 3 deaths, these being due to continuous hemorrhage from laceration of the liver substance on the seventh day, to cholemia on the fourth day, and to septicemia on the fourth day, respectively. Of his 12 malignant cases, ten died, giving a mortality of 83.3 per cent. It is important, before performing this operation, to observe whether the cystic duct is unobstructed, because if the gall bladder is small, on account of loss of function, the operation is useless. Should the cystic duct be partially or completely obliterated, hepatic drainage is indicated, and when the gall bladder is diseased its excision should be performed in addition.

The question of drainage occupies a prominent place in the technique of all gall bladder operations. There is never any doubt in the mind of the operator as to the wisdom of draining the suppurative forms of cholecystitis and cholangitis. With a gall stone partially obstructing the common duct and a shrunken, thickened gall bladder, the most rational operation at first would seem to consist in removing the stone, closing the duct, and excising the gall bladder. In addition to the tubular drainage, in such cases, he places two strips of gauze, one leading to the stump of the gall bladder, the other slightly spread beneath the wound in the common duct. It is safer to drain the hepatic duct at all times, not only on account of infection, but owing to the likelihood of overlooking stones in the hepatic ducts. Kehr even goes so far as to state that after choledochotomy with suture, "even the most skilled surgeon must count upon overlooking stones in from ten to fifteen per cent of his cases." The speaker uses a smaller-sized tube than the latter author when draining.

The question, when is the time of election for performing a surgical operation upon patients suffering with cholelithiasis, has been answered time and again by surgeons. Mayo Robson believes that "as soon as gall stones give serious trouble, their removal by operation is the most rational method of treatment, since it is only from the complications, which in many cases of cholelithiasis arise sooner or later, that any danger after operation may be apprehended." It is the opinion of Dr. Deaver, after a rich experience in complicated and uncomplicated cases, that operation should be resorted to as soon as it is definitely known that gall stones are present. The recent statistics published by Kehr speak eloquently for the results of early operation. In 535 uncomplicated laparotomies for gall stones, the mortality was 3.5 per cent. In 71 simultaneous operations in inoperable carcinoma of the gall bladder, common duct or liver, in diffused suppurative cholangitis, diffused suppurated peritonitis and sepsis, the mortality was 97 per cent, nearly every case, 69 out of 71, succumbed to the deadly spread of infection or to carcinoma possibly the result of chronic gall stone irritation. In 114 operations on the stomach, intestines, pancreas, liver, kid-

ney, etc., 24 per cent died. These cases were those in which extensive adhesions, chronic pancreatitis, or various changes in the liver and kidney made the operation difficult and the anesthesia prolonged. Gall stones, per se, never kill, and fatal infectious cholangitis is not common in the absence of a stone in the ducts. It is only in the presence of great adhesions, fistulae, suppuration, pancreatitis, or disease of the liver and kidneys that the mortality rises in direct proportion to the grade of the complication. Operation is particularly indicated in those cases of chronic calculous cholecystitis, without jaundice, and with or without enlargement of the gall bladder. Like the interval operation in appendicitis, with a chronic low grade inflammation, perhaps a fecal concretion, and with more or less adhesions, the removal of the diseased gall bladder can be performed with as much celerity and safety as can the amputation of such an appendix. Unoperated, they give rise to a train of symptoms driving the unfortunate patient to the stomach specialist, or to places like Carlsbad. The stones are too large to pass the cystic duct and the low grade inflammation is responsible for a sequel of symptoms which lead to chronic invalidism.

William J. Mayo, of Rochester, Minnesota, said there are two important questions in connection with surgery of the gall bladder and biliary passages, which are as yet unsettled. First, in what cases shall we remove the gall bladder? Second, in what cases is it wise to drain the bile to the surface? The majority of the complications of gall stone disease are the result of delay, and that preceding this time, there are diagnostic symptoms which would have enabled an operation to have been performed with much less danger. Should we, in the early uncomplicated cases of gall stone disease, take the gall bladder out, or is it sufficient to drain it for a time, until the biliary discharge is sterile? Without going extensively into the physiology of the gall bladder, there is no doubt but that Murphy is right in believing that one of its functions is to act as a tension bulb, keeping the flow of the bile steady instead of intermittent. This is unimportant of itself; but when the gall bladder is suddenly cut off by a stone impacted in the cystic duct, there are not only symptoms arising from the retention in the cystic cavity, but there is usually some irritation of the liver from the increased tension and mild infection, shown in many cases by transient slight jaundice, etc. The liver soon accommodates itself to this change and when the acute symptoms of obstruction are over, such a gall bladder can be tied off without liver drainage, but if the cystic duct is not obstructed and the gall bladder still persists in the biliary circulation in spite of the stones the sudden tying-off of the cystic duct, without provision for the escape of bile is liable to increase liver tension and coincidentally the infection of the liver ducts, and adds this condition to the usual risks of operation. It is altogether probable that in the majority of cases this would do harm, yet in the exceptional one, cessation of liver function and death may follow. As stones do not re-form after complete removal and drainage, it would seem to the speaker that the

excision of the otherwise healthy gall bladder, on account of gall stones, subjects the patient to some unnecessary risks, unless some provision is made for hepatic drainage. The thick contracted gall bladder, with obstruction at the cystic duct, has lost its function and such a gall bladder is the one in which we are liable to have future trouble from mucus fistula, adhesions, cancer, etc. Fortunately, by reason of the obstruction, the liver has become accustomed to the change in the extension, and such a gall bladder can be removed without biliary drainage. He has never seen harm follow the ligation of the cystic duct in such cases, and this exists in about one-third of the cases as they come to the operating table. Stones in the common duct are the cause of cholangitis, and drainage of bile to the surface is necessary either by a cholecystotomy, if the cystic duct is sufficiently patulous for the purpose, or by leaving the incision in the common duct open, the latter being the safer method. To what extent it is necessary to provide bile drainage in cases in which there are no stones in the common duct? Cholecystostomy drains the hepatic ducts by the escape of bile to the surface, and all of experience have seen a patient doing badly, suddenly relieved by a discharge of bile in a previously dry wound. So true is this that often with a patient not doing well, the drains are loosened, hoping to establish bile drainage and, if one succeeds, recovery usually follows. He has tried to classify his cases with regard to the necessity of hepatic drainage. The following is about the position he has temporarily assumed as a result of this study: (1) If the gall bladder contains bile and the organ is distensible, if the gall bladder be removed, bile drainage is provided for by cutting the cystic duct across and leaving it open. If such a patient is very obese, or has degenerative lesions of other organs, he prefers cholecystostomy. (2) If there are symptoms of a cholangitis, even of mild grade, he provides for bile drainage, and if the condition is acute, the drainage must be free. (3) If the gall bladder contains cystic fluid, but no bile, and the patient has symptoms of cholangitis, he removes the organ and cuts the cystic duct below the obstruction, to permit of bile discharge. If necessary, the cystic duct is split down to the common duct. (4) In a few cases he has directly opened the common duct, for the purpose of securing liver drainage, but it is very rare that this is necessary, unless there are or have been stones in the common duct and it is dilated. The cystic duct ordinarily can be advantageously used for the purpose, although in a few instances he has found it necessary to cut it off flush with the common duct, leaving a lateral defect in its wall for drainage purposes. This brings up the question as to how much danger of peritonitis there is as a result of bile leakage into the peritoneal cavity. If there is free gauze drainage with or without tubage, there is but little danger of peritoneal infection from the bile. He has never seen a case of death from this cause; but the drainage should be attached to the proper point by a catgut suture to prevent its floating away by the bile discharge or displacement by the action of the diaphragm upon the liver. If the

common duct is greatly dilated and after removal of the calculi there is considerable detritus, the end of a rubber drainage tube is inserted just into the duct opening and secured by a catgut suture. If this condition does not exist, tubage of the common duct is unnecessary.

To sum up; Cholecystectomy is to be preferred if the patient is otherwise in good condition. If the cystic duct is obstructed and the gall bladder contains only cystic fluid, ligation at the cystic duct, without provision for hepatic drainage, is safe. If there be any infection of the hepatic ducts, bile drainage is essential.

Gall Stones and Gall Bladder Diseases from the Standpoint of the Physician.

Norman Bridge contributed a paper on this subject. He stated that the physician can often present the urgency of an operation to the patient better than the surgeon. Most people dread operations, and many suspect the surgeons of having undue enjoyment in the act of operating and of being biased by visions of large fees. The physician is, for these reasons, a more acceptable counselor, but even he, in these later days, says the essayist, is not free from the suspicion of seeking a part of the surgeon's reward.

The author cited cases which vividly illustrate the long continuance of gall bladder symptoms without recognition.

Whether operation shall be done in all cases of proven gall stones, or of suppuration or distention of the gall bladder, is the same question over again of the misfortunes of the appendix. Cases become quiescent, or recover and remain so for years, even with gall stones, the patients dying of other diseases or of old age. Hence one camp of doctors contends that in all such cases we should wait; not operate until forced to it by some urgent symptoms or situations. The other camp says that, for the sake of safety, operation should always be done promptly, since the next attack might prove fatal. Both are in part right; neither can prove the other wholly wrong.

People are taking great personal risks in manifold ways all their lives, and with the lightest thought. But if one suffering from cholelithiasis, to the extent of producing marked symptoms, would minimize to the lowest point his danger of death from it, he will probably have it dealt with surgically, always provided he has a surgeon who is wise in pathology and procedure, as well as expert in technique, and provided the patient has good vital organs. That statement is still true of the diseased appendix; it is true of gall stones and gall bladder infection as well.

All cases of chronic cholelithiasis, where the suffering has led to the opium habit, should be operated. Every case of known distention of the gall bladder by fluid of any sort is in constant peril, and should be operated, if possible. If there is reason to believe the bladder contains pus, operation is urgently demanded. And in all cases where frequent recurrences, or the persistence of symptoms indicate the progressive contraction and fibrosis of the gall bladder, operation should be insisted on, for in these there

is constant danger of an explosion of infection that may destroy life.

All cases of proven gall stones or gall bladder trouble are proper subjects for surgical consultation, whether they are to be regarded as surgical cases or ever come to operation. Whether operation is to be done or not, when conditions do not sound the insistent need of an operation, or the patient declines, or the physician sees reasons against an operation, proper medical treatment should be instituted always, and persistently carried out. This is true of the gall stone troubles as it is of those of the appendix.

What are such measures? In the acute cases, there should be absolute rest of the body. Rest of the stomach and bowels to the extent of starvation for some days is best, especially where peritonitis is present or threatened. Nutrient enemas may be allowed tentatively, but never nutrition by the stomach in such cases. The upper abdominal organs must be kept still, not be shaken about by peristaltic movements.

In the subacute and chronic cases the daily full flushing of the bowels by alkaline laxative waters is useful, but it is irrational to suppose that gall stones are thus washed away. Nor do olive oil or any other of the pretended expulsive agents have the smallest effect. The thing that happens is probably merely the elimination of effete matter, thus increasing the physiologic resisting power. This process is aided by a restricted diet of the most assimilable foods, and by general good hygiene.

Frank Billings, speaking from the standpoint of the internist, said that given a reasonable certainty of the presence of gall stones in the gall bladder or ducts, it calls for their removal by means of the surgeon's knife, with the statement modified to this effect, namely, that where there exists some disease of other organs of the body, as the kidneys, or the heart, which would render the use of an anesthetic immediately dangerous to the health of the individual, it was questionable whether operation should be done. If gall stones are acute in their manifestation, his advice is to wait until the symptoms have diminished or subsided. If attended with jaundice, to wait a reasonable time to see if it does not diminish, and if it does not diminish, to attempt to improve the coagulability of the blood by the use of calcium chloride. In recent years, by means of calcium chloride, the coagulability of the blood has been increased or improved to such an extent as to make a surgical operation less dangerous than before it was given. He would go further than Kehr, if he understood him correctly, and say that if there are symptoms of gall stones in the common duct, and they subside, and if following that, within a reasonable length of time, there are further symptoms or indications of gall stones he would urge operation. He understood from the paper read by Kehr at Washington that he (Kehr) would not operate on such cases. While the speaker made this statement from a medical point of view, of operating on gall stone cases when the evidence was clear that they were present, surgeons should not forget that they owe a great deal of what they know to-day to Pasteur and Koch. It is the work of Pasteur, Koch, Lister and others that has enabled sur-

geons to open the abdomen in these cases, and to treat them successfully.

Dr. Billings then recounted briefly the symptoms of cholelithiasis and pointed out their peculiarity.

He said the medical treatment of gall stones was instituted long before surgeons opened the abdomen for the relief of this condition. The Carlsbad treatment has been in vogue for years, and surgeons should not censure medical men too much for sending their patients to Carlsbad or resorting to medical treatment, when it was known that a celebrated surgeon who, two years after operating on his own father for gall stones was attacked himself, but instead of undergoing an operation, he went to Carlsbad for treatment.

Arthur Dean Bevan said that in a discussion as broad as the one on the subject of cholelithiasis, he took it that brief conclusions arrived at from a review of one's own experience would be in order, and with such an idea in view he submitted the following:

1. "Gall stone disease is due to a mycotic invasion of the bile tracts. Gall stone disease is exceedingly common. From my dissecting room experience, it occurs in 16 per cent of such cadavers.

2. "In the vast majority of cases of gall stone disease, the patient does not suffer from the existence of the condition.

3. "A close parallel cannot be drawn between cholelithiasis and appendicitis, and the conclusions which we have all arrived at in appendicitis, i. e., that a diseased appendix should in practically all cases be operated on, cannot with equal force be applied to cholelithiasis: (a) Because the disease, in its first manifestations, does not carry with it nearly the amount of danger to the patient as does appendicitis. (b) Because of the enormous number of individuals who have gall stones many have slight, single or very infrequent manifestations of the disease, which are speedily recovered from; carry little danger, and a good prospect of permanent recovery. Several of my colleagues have had single attacks, and have been advised by both surgeons and internists to await developments and postpone operative interference until the indications warranted it.

4. "As a corollary to the above, the hygienic treatment, i. e., exercise, diet, salines, is indicated in cholelithiasis, as a rule, in the first manifestations of the disease.

5. "Surgical treatment is indicated when the manifestations of the disease are repeated, and especially when they are frequent and severe. Surgical treatment is demanded when we have: (a) An infected gall bladder; (b) with stone or obstruction of the cystic duct; (c) with stone or obstruction of common duct.

6. "With stones still confined to the gall bladder, cholecystotomy with drainage is the operation of choice.

7. "With stone in the cystic duct, or obstruction of cystic duct, cholecystectomy is the operation of choice.

8. "With stone in the common duct, choledochotomy with drainage is the operation of choice.

9. "With stone in both cystic and common ducts, cholecystectomy and removal of stone

from common duct, and drainage of common duct, is the operation of choice.

10. "With obstruction of common duct from chronic interstitial pancreatitis or carcinoma, drainage of the bile tracts through the gall bladder is the operation of choice.

11. "In the cases of cholecystitis and cholangitis simulating gall stones, drainage of the gall bladder should be carried out, and with this probably the use of salicylate of sodium, which is excreted through the bile, and has seemed to exert a definite local antiseptic effect.

12. "To expose the bile tracts, the incision which I introduced in 1898, as modified by Weir and Mayo Robson, gives the best access to the region, makes the operation in difficult cases much easier, saves valuable time, and is least likely to be followed by hernia.

13. "The mortality from gall stone operations is surprisingly small in uncomplicated cases. I have had no deaths in more than one hundred cholecystotomies, and in more than twenty cholecystectomies have had but one death in fourteen cases of obstruction of the common duct.

14. "The prospects of permanent cure after operative removal of gall stones are very good. The recurrences of symptoms are almost always due to incomplete operations, i. e., leaving some stones or the doing of a cholecystotomy where a cholecystectomy should have been done.

15. "Personally, I have seen little evidence pointing to gall stones as a factor in the production of carcinoma, and therefore incline to the belief that carcinoma favors gall stone formation, and is the cause and not the effect where these two conditions coexist.

16. "The modern surgical treatment of cholelithiasis is, with the exception of the surgical treatment of appendicitis, the most valuable addition that has been made to medicine during the last twenty years. Inasmuch as the general practitioner sees most of these cases, in their early history, it rests with him whether or not this valuable knowledge will be made the most of and accomplish the greatest amount of good."

Dr. Deaver, in closing the discussion, said that the points brought out by Dr. Mayo relative to the non-removal of the gall bladder in certain cases were very apropos. In the past he had made the mistake of tying off the cystic duct and removing the gall bladder when he should have done a cholecystotomy. However, nature had come to the rescue, had forced the ligature off, established a biliary fistula, and had saved the patient's life.

The remarks of Dr. Bevan were in harmony with the position taken by most surgeons with regard to the treatment of cases of cholelithiasis.

A short time ago, in an address delivered in this city, the speaker said the surgeons of the East had to bow to the surgeons of the West, and after hearing the remarks of Dr. Billings, he was prompted to say that the medical men of the East would now have to bow to the medical men of the West. If the medical men of the East took the advanced position enunciated by Dr. Billings in regard to operative intervention in cases of gall stones, it would not cause surgeons to have so many gray hairs, to spend so

many restless nights, and make them prematurely old.

The Decatur Medical Society held its annual meeting May 26, 1903. The following officers were elected:

President—Silas E. McClelland of Decatur.

Vice President—Charles M. Wood of Maroa.

Secretary-Treasurer—Lynn M. Barnes of Decatur.

H. C. Jones, chairman of the delegates, sent by this Society to the Chicago meeting made his report. A new Constitution and By-laws were adopted which made provision for the affiliation of this Society with the State and National Organizations. The committee used as a basis for their work the Constitution and By-laws recommended in The Journal of the American Medical Association of August 9, 1902, which with slight changes was considered very satisfactory. About 71 per cent of our members are now enrolled in the three societies with a fair prospect of increasing the number. Retiring President S. J. Bumstead was tendered a rising vote of thanks for the efficiency and zeal with which he had performed the duties of his office.

Nathaniel Allison of St. Louis was present by invitation and presented a paper on **Scoliosis from Empyema; Its Pathology and Treatment**. It was illustrated by enlarged photographs of original cases, and apparatus was shown. The discussion was very spirited and general.

Drs. Griffith, Munson and Hagler of Springfield and Dr. Edminson of Clinton were present.

Lynn M. Barnes, Official Reporter.

The Adams County Medical Society held its regular monthly meeting at the Conservatory of Music June 8, 1903. R. J. Christie, sr. and I. T. Wilson were elected to honorary membership. Failure of regular essayists to appear, voluntary reports of cases were received.

John A. Koch, Official Reporter.

The Physicians' Club of Chicago held its annual meeting at the Sherman House June 1, 1903. The reports of the retiring officers showed that the Society is in a most flourishing condition. The following officers were elected:

For Secretary—Henry F. Lewis, for one year, 4426 Lake ave.

For Directors—Joseph Zeisler, A. M. Corwin, Chas. P. Small, for two years. A. C. Cotton, J. Clarence Webster, John M. Dodson, hold-over for another year.

L. Harrison Mettler, Official Reporter.

The Vermilion County Medical Society met June 8 in the city hall at 8:15 o'clock p. m.

The paper of the evening was by E. E. Clark on "A Plea for More Thoroughness in the Attempt to Prevent Ear Complications in Certain Diseases." The discussion was opened by C. E. Wilkinson and closed by the essayist.

No further business the Society adjourned to the regular October meeting.

E. E. Clark, Official Reporter.

The Mercer County Medical Society convened in annual meeting at the court house Thursday, April 23, at 11 a. m., President M. G. Reynolds in the chair, and a large attendance of physicians from all parts of the county, and visiting physicians from other parts of the state. The meeting was an unusually large and profitable one. A paper was read by E. C. G. Franing of Galesburg, topic, "Accidental Wounds," followed by lively discussion; also by A. L. Craig of Chicago. W. S. Ryan of Viola read a paper which was very valuable, entitled "Infantile Feeding and Care," which would have been of interest to any mother to have heard. Many joined this discussion which added interest to the occasion. In addition to the mental feast we partook of a sumptuous repast prepared by the wives of Aledo's physicians at the home of our president, M. G. Reynolds, where all were so elegantly entertained and physical nourishment so well served. Those present were: Drs. Hainline and wife, Hay and wife, Sells and wife, McClanahan and wife, Carter and wife, Wright and wife, Ryan and wife, Wallace and wife, Irvin and wife, Morrison and wife, Reynolds and wife, Mackey and wife, Mrs. Dr. Johnston and son, Drs. Fletcher, Allen, Ramsey, Miles, McMillin, and visiting physicians, A. L. Craig of Chicago, E. C. G. Franing of Galesburg and Dr. Fitzmiller of Viola.

C. W. Carter was elected as delegate and V. A. McClanahan alternate to the Illinois State Society to convene in Chicago, April 29.

Officers elected were as follows: President, H. H. Fletcher, North Henderson; vice president, C. W. Carter, Aledo; secretary and treasurer, A. N. Mackey, Aledo; board of censors, H. S. Allen, New Boston; W. Miles, Viola; H. H. Sherwood, New Windsor.

The next meeting will be held at Viola July 14, 1903.

A. N. Mackey,
Official Reporter.

The Adams County Medical Society held its regular monthly meeting at the Conservatory of Music, Quincy, May 11, 1903, and was called to order by President Williams.

The following members were present: L. B. Ashton, A. H. Byers, T. B. Knox, Virgil McDavitt, E. B. Montgomery, H. J. Nichols, L. H. A. Nickerson, T. V. Noakes, G. E. Rosenthal, Sarah Vasen, O. F. Wellenreiter, W. W. Williams and John A. Koch.

The April minutes were read and approved.

President Williams named the following on committees:

Committee on Program and Scientific Work—John A. Koch, chairman; Jos. Robbins, Sarah Vasen.

Committee on Public Health and Legislation—L. H. A. Nickerson, chairman; Ernst Zimmermann, W. E. Gilliland.

Committee on Social Entertainments and Refreshments—R. J. Christie, jr., chairman; Henry Hart, F. E. Tull.

The secretary read the names of the 64 members who had paid their dues and retained

membership and the names of the members who became suspended on account of non-payment of dues.

Wm. Sigsbee and J. F. Durant were elected honorary members.

The Society desires a report from the Committee on Social Entertainments and Refreshments by the June meeting.

E. B. Montgomery, delegate to the State Society, gave a report of the proceedings of the recent annual meeting. Sarah Vasen supplemented the report with a few remarks.

L. B. Ashton gave a clinical report of "A Case of Traumatic Peritonitis due to Rupture of the Rectum."

John A. Koch, Official Reporter.

The McLean County Medical Society held its meeting in the Griesheim Building, June 11. Dr. Edson Hart reported a very unusual case of **Hysteria**. The patient was an inmate of the County Jail and the condition had to be diagnosed from any attempt of the patient to simulate disease.

W. E. Guthrie who was to have given a demonstration of the **Use of the X Ray for Diagnostic Purposes** being unavoidably absent asked Dr. Mammen to take his place. Dr. Mammen gave a very comprehensive review of the X-Ray. He said that the popular notion of this form of electricity is much exaggerated and that accounts for the harvest which the quacks reap from it.

It however is of inestimable use in diagnosing fractures, dislocations and in locating foreign bodies.

Of late the X Ray has been used much in the treatment of malignant disease, especially if located superficially. The physician however should not delay operation where this method of treatment offers hope of permanent cure. Some cases which have apparently been inoperable have reacted favorably to the X Ray and some have even been cured.

Dr. Cantrell of Arrowsmith was voted a member into the society and Dr. L. J. Hammers of Lexington was proposed for membership.

A. H. Kaser, Official Reporter.

The Sangamon County Medical Society held its regular monthly meeting, Monday evening, June 8th, in the Supervisor's room at 8:30 o'clock with A. L. Brittin, president, in the chair. The minutes of the May meeting were read and approved. Not having a quorum present the business was held over till next meeting. The Secretary-Treasurer was authorized to pay the bills of Phillips Bros., \$1.50, and Secretary, \$2.00 for stamps and janitor service.

C. H. Walters read a paper on Cystitis, Acute and Chronic, bringing out some very interesting points, after the paper was discussed and a few cases reported the society adjourned.

Percy Taylor, Official Reporter.

The Cass County Medical Society met in Beardstown, June 10th with a larger attendance than at any time since our organization. This meeting was devoted almost entirely to the arranging of a plan whereby the pauper work of the county might be better arranged to the satisfaction of all physicians in the county. Briefly the plan is this, instead of permitting the county commissioners to appoint county physician, as it has been. To permit the physicians to attend any pauper case, reporting the same to the proper overseer of the poor, then file his bill and collect from the county such fee. Thus giving each physician a chance to be paid for his work, instead of a few drawing a fixed salary, and doing no more pauper work than any of the other physicians who got no pay. The plan is a good one, and the matter is well in hand, and while there is some opposition from the commissioners, we will win we think without fail.

A. R. Lyle read an interesting paper on **Medical Nomenclature**, which was well received, and commented on. The paper briefly depicted the tendency of some, to coin new names for old diseases, and the effect the same had in impressing the mind of the layman in magnifying the importance of the coiner for the time only, to fall in a short time back to the old, and the coiner to be laid by in like manner. Please forward L. M. Linker's journal to Ashland, instead of Bluff Springs, as he has changed locations.

J. A. McGee, Official Reporter.

The Rock Island County Medical Society held a regular meeting at the Harper House, Rock Island, at eight o'clock Tuesday evening, May 19th.

An amendment to the by-laws was adopted, which provides that the regular meetings of the Society shall be held bi-monthly, instead of monthly.

There having been no program prepared for the meeting, the time was occupied in hearing reports from the delegate to the State Medical Society, and one of the state delegates to the American Medical Association, of the more important matters disposed of in the House of Delegates at these meetings.

The regular June meeting of the Society was held at the Hotel Harms, Rock Island, at eight o'clock Tuesday evening, June 9th. There were present about forty or fifty of the profession of Rock Island County and Davenport, Iowa.

After the routine business of the meeting was disposed of, John Ridlon of Chicago addressed the meeting on the subject of **Club Foot**. Dr. Ridlon's address was a most polished and instructive exposition of the subject, accompanied by a demonstration on a young boy of the methods pursued in the treatment of the deformity by this most skillful orthopedic surgeon.

A very instructive hour was spent by the Society in discussing different points in the technique of reducing the deformed foot to normal proportions, and the after treatment to maintain it so, until the tissues were permanently restored to normal conditions.

The meeting was then entertained by a smoker and delightful German Lunch, which rendered very pleasing a couple of hours of social intercourse.

The society then adjourned to meet on the second Tuesday in August.

George C. Eyster, Official Reporter.

The Chicago Medical Society at the annual meeting Wednesday, June 17th, Robert B. Preble was elected president to succeed W. A. Evans. Frank X. Walls was re-elected secretary and A. E. Halstead treasurer. The election was held in Schiller hall. In the evening Frank A. Jones of Memphis, Tenn., read a paper, and the annual reports were presented. The new president was introduced by Dr. Evans and delivered an address.

The following is an abstract of Dr. Jones' paper on the subject: "**Syphilis in the Negro.**"

Syphilis precocious, fulminating. All stages existing simultaneously. Showing infection to be rapid and acute. Insidious pleuritic effusions frequently traceable to no other cause than a recent acute syphilis. History of previous attack of pleurisy or pneumonia absent. No cough, no dyspnea. No temperature. Physical examination reveals typical pleuritic effusions. Illustrative case. Phthisis of the acute pneumonia type predominates. Terminates fatally in a short while. In the majority of the cases there is a history of a previous acute syphilis, hence the frequency and fatalities of phthisis in the negro. Low vitality from syphilis gives the bacilli of tuberculosis "the right of way." No confidence in the theory that fibrous overgrowth from tertiary syphilis offers a checkmate to tubercular invasions. Cardiac lesions, both valvular and muscular, all more frequently traceable to syphilitic infection than to rheumatic. Carditis exists in the truest sense. A word that should be used in text-books more. Illustrated cases of valvular lesions showing a previous acute syphilis. The "Cor Bovis," arteriosclerosis and contracted kidney of interstitial nephritis obtain to the highest degree. Syphilis the basis. Report of forty-eight cases of stricture of the rectum, forty-six of which were unmistakable syphilitic infections. Forty-seven were in the female out of the total forty-eight cases. The youngest a prostitute 18 years of age. Rectum becomes early infected from chancre on posterior wall of vagina.

Northwest Branch. The regular meeting of the Northwest Branch of the Chicago Medical Society was held on Friday, June 5, 1903, at 8:30 P. M., at the Schoenhoffen Hall restaurant, corner Milwaukee and Ashland avenues, President M. H. Lacken in the chair.

Owing to the postponement of the May meeting, the May program was given at this meeting, and, in addition, a report on "Carcinoma of the Larynx," with presentation of cases by Geo. A. Tarrison.

Symposium on Measles: The Etiology and Diagnosis, R. S. Michel; The Pathology, E. A. Seufert; The Prophylaxis and Treatment, J. H. Dal. A general discussion followed.

Louis J. Pritzker, Official Reporter.

Aux Plaines Society. The May meeting of the Aux Plaines Society was held at the Phoenix Hospital, Maywood, on Friday evening, May 22, 1903.

The paper of the evening was read by Dr. Vanderhoof of Wheaton, entitled **Acute Milk Infection in Infants**. Discussion was opened by H. C. Worthington of Oak Park.

We were honored at this meeting by having with us W. A. Evans, to whom was tendered a vote of thanks of the Society for his conspicuous ability and success in the organization of the medical profession.

The paper for the meeting, June 26th, entitled **Some Irregular Forms of Pneumonia**, will be read by C. E. Humiston of Austin. Discussion will be opened by Gustavus P. Head.

North Shore Branch. The regular meeting of the North Shore Branch was held Tuesday, June 2, 1903, at 8:30 P. M., at the North Shore Lunch Room, 1884 Evanston avenue, near Wilson avenue.

Program.

1. Diagnosis and Treatment of Gastric Ulcer, George De Tarnowsky.
2. Digestive Tract in Pneumonia, Alben Young.
3. Discomforts of the Pregnant State and their Relief, Fredrica Baker.
4. The Relation of Purpura Rheumatica to Rheumatism, with the report of a case, A. C. McClanahan.

Discussed by L. L. Gregory.

George Edwin Baxter,
Official Reporter.

The Chicago Gynecological Society. The 240th regular meeting was held in Room 301, Schiller Building, 103 Randolph street, Friday, June 19, at 8 P. M.

Program.

1. Exhibition of Specimens.
2. Palmer Findley will show specimens of menstruating Fallopian Tubes.
3. Rudolph W. Holmes will show several Placentae from cases of Ablatio Placentae.
4. Presentation of Instruments.
5. Reports of Cases.
6. A Case of Phlegmasia Alba Dolens in Pregnancy.

C. S. Bacon,
Official Reporter.

North Side Branch. The regular meeting of the North Side Branch of the Chicago Medical Society was held on June 11, 1903, at 8:30 P. M., in the rooms of the Chicago Academy of Sciences, corner North Clark and Center streets.

Symposium on Pneumonia.

1. Etiology, D. W. Craig.
 2. Symptoms, H. A. Ware.
 3. Blood in Pneumonia, R. B. Preble.
 4. Pneumococcus Infections of the Throat, J. Beck.
 5. Relation of Pneumonia to Diseases of the Eye, Mortimer Frank.
 6. Therapeutics, F. D. Hollenbeck.
 7. Post-Operative Pneumonia, O. J. Waters.
 8. Pneumonia in Children, F. S. Churchill.
- Mortimer Frank, Official Reporter.

West Side Branch. The West Side Branch of the Chicago Medical Society met at the County Hospital, Thursday, June 18, at 9 P. M.

John A. Robinson exhibited Clinical Cases.

C. J. Rowen exhibited Clinical Cases.

H. G. Graham exhibited Microscopical Specimens showing the "Life Cycle of the Paramecium Aurelia."

This was the last meeting until after the summer vacation.

J. J. Alderson,
Official Reporter.

Marriages, Deaths and Changes of Address.

Marriages.

- Mark T. Goldstein to Miss Sadie D. Richter, Chicago, June 2.
A. B. Howatt to Miss Mabel Lewis, Chicago, May 21.
W. A. Koch, Middletown to Miss Anna M. Rayburn, East Menard.
Lewis Rhodes to Miss Eva N. McDavid, Lincoln, June 3.

Deaths.

- Bailey, Ann Eliza, Chicago, at Sutter Creek, Cal., May 23, aged 60.
Bolinger, J. A., Oakford.
Deegan, William, Chicago, May 6, aged 40.
Eversman, Henry, Effingham, April 7, aged 66.
Hunt, Florence W., Chicago, at Milwaukee, Wis., May 27, aged 45.
Shelton, John H., Tower Hill, May 13, aged 68.
Sims, James M., Marion, May 16, aged 33.
Smith, Edgar D., Chicago, June 1, aged 40.
Tagert, A. T., Chicago, May 27, aged 57.

Changes of Address.

Changes in Chicago.

- Abell, Nathan W., 1753 Milwaukee ave. to 898 Mozart st.
Acres, Louise, 968 Monroe st. to 983 Jackson blvd.
Ainsworth, H. H., 724 Flourney st. to 804 Warren ave.
Arnold, Wm. J., 6759 Honore st. to 6759 Parnell ave.
Babcock, Robt. H., 101 State st. to suite 1003, Stewart building.
Bates, M. D., 34 Washington st. to Jackson blvd. and Halstead st.
Beardsley, Jennie A., 6405 Eggleston ave. to 6305 Normal ave.
Brugge, Henry, 2016 W. Polk st. to 1997 Polk st.
Cole, S., 3305 Vernon ave. to 4246 Vincennes ave.
Collins, Dennis, 149 26th st. to 4562 Indiana ave.
Corey, A. L., 4101 State st. to 47th st. and Wash ave.
Cuthbertson, Hugh A., 332 63rd st. to 242 Woodlawn ave.
Davis, Achilles, 5539 Indiana ave. to 5501 State st.
Edwards, Arthur R., 2818 Indiana ave. to 3801 Grand blvd.
Eisenstaedt, S., 100 State to 4619 Vincennes ave.
Falls, S. K., 151 Western ave. to 1028 W. Monroe st.

Frankenthal, Lester E., Schiller bldg., to 4825 Woodlawn ave.
 Hagey, H. H., Wentworth ave. to 4191 S. Halstead st.
 Hakanson, A., 6306 Halstead st. to 417 31st st.
 Hall, Geo. C., 5145 Armour ave. to 5736 Rosalie court.
 Harpole, W.S., 157 47th st. to 4827 Madison ave.
 Harrison, W. K., 30 Walton place to 52 Walton place.
 Heller, C., 4005 Grand blvd. to 4417 Berkley ave.
 Hess, Julius H., 4832 Indiana ave. to 5501 Indiana ave.
 Holmes, Bayard, 101 State st. to suite 1003, Stewart bldg.
 Kilbourne, E. D., 369 63d st. to 6136 Madison st.
 Kimmert, Wm. A., 1022 N. Halstead st. to 465 Fullerton ave.
 Knudson, T. J., 4713 Indiana ave. to 4646 Prairie ave.
 Larned, E. R., 44 Franklin st. to 4217 Calumet ave.
 Letourneau, R. A., 70 36th st. to 3601 Ellis ave.
 Lowenthal, L. L., 3135 S. Park ave. to 3058 Calumet ave.
 McClung, Albert V., 6407 Lexington ave. to 460 Inglehart st.
 McCurdy, James G., 2069 W. Congress st. to 227 S. Lincoln st.
 Morf, Paul E., 115 Claybourne ave. to 318 Webster ave.
 Newhall, Geo. F., 811 W. Irving Park blvd. to 1127 Racine ave.
 Oakes, J. F., 347 62d st. to Box 423.
 Orton, Susan, 5810 Prairie ave. to 604 E. 46th st.
 Porter, Mary O'Brien, 1412 Jackson blvd. to 1439 Jackson blvd.
 Porter, J. L., 103 State st. to 5037 Madison ave.
 Price, O. J., 578 W. Madison to 538 W. Adams st.
 Richter, Arthur J., 4050 Grand blvd. to 4836 Calumet ave.
 Schlesinger, M. L., 549 N. Roby st. to 301 Milwaukee ave.
 Soliday, Virginia R., 257 65th st. to 5020 Washington st.
 Stamm, John Chas., 203 Blue Island ave. to 2097 N. 12th st.
 Stevenson, Alex. F., jr., Presbyterian Hospital to 398 LaSalle st.
 Stubbs, F. Gurney, 4256 Grand blvd. to 3203 S. Park ave.

Suker, Geo. F., 100 State st. to 103 State st.
 Tice, Frederick, 1044 W. Monroe st. to 1496 W. Madison st.
 Tillotson, Harry, 6301 Wentworth ave. to 403 W. 64th stt.
 VanBenschoten, Wm. C., 6303 Monroe st. to 369 E. 63rd st.
 VanHoosen, Bertha, 489 42d to 4845 Calumet st.
 Wall, C. Delamere, 171 Blue Island ave. to 339 S. Lincoln st.
 Wells, Edwin F., 4571 Lake ave. to 4744 Woodlawn ave.
 Wells, J. L., 3214 Malden st. to 267 Michigan ave.
 Wheeler, Roy Mac W., 128 W. 67th st. to 152 W. 67th st.

Changes From Chicago.

Balderston, S. Victor, 1578 Chicago ave. to 614 Clark st., Evanston, Ill.
 Boone, John C., 1076 Millard ave. to Wickliff, Ky.
 Cambourn, Stephen A., 5101 Wentworth ave. to Lisbon, Kendall Co., Ill.
 Galliver, G. A., 1256 Perry ave. to Bagdad, Fla.
 Lehman, Sam W., 702 Wilson ave. to Dixon, Ill.
 Lemon, Herbert K., 4800 Indiana ave. to Goshen, Ind.
 Tucker, Frank, from Chicago to Virden.

Changes to Chicago.

Baxter, Geo. Edward, Jacksonville to Chicago.

Changes in Illinois.

Bartells, H. W. F., Bensenville to Wooddale.
 Brayshaw, Jas., Berlin to Sidney.
 Beadles, Chas. H., Bloomington to Oglesby.
 Bonnett, John Y., Bloomington to Leroy.
 Guest, Thos. A., LaGrange to Congress Park P. O., Cook Co.
 Bromley, Cerlida M., Pontiac to E. St. Louis.
 Hanson, Frank, Tonica to South Wilmington.
 Hart, S. P., Waverly to Auburn.

Changes to Illinois.

Rooney, Abby Fox, Ann Arbor, Mich. to Quincy, Ill.
 Podstata, V., Lake Geneva, Wis., to Dunning, Cook Co., Ill.

Changes From Illinois.

Henry, R. H., Peotone to Appleton, Wis.
 Smith, D. G., Virginia to Arkoe, Nodaway Co., Mo.

THE MILWAUKEE SANITARIUM

WAUWATOSA, WIS.

FOR NERVOUS AND MENTAL DISEASES.

Wauwatosa is a suburb of Milwaukee on the Chicago, Milwaukee and St. Paul Railway, 2½ hours from Chicago, 5 minutes' walk from all cars and trains.

Physician in charge: RICHARD DEWEY, A. M., M. D.

CHICAGO OFFICE, 34 Washington St., Wednesday 11:30 to 2 o'clock (except in July and August). Telephone connections, Chicago and Milwaukee.

THE CINCINNATI SANITARIUM

A Private Hospital for Mental and Nervous Disorders, Opium Habit, Inebriety, Etc.

TWENTY-NINE years' successful operation. Thoroughly rebuilt, remodeled, enlarged and refurnished. Proprietary interests strictly non-professional. One hundred and fifty patients admitted annually. Detached apartments for nervous invalids, opium habit, inebriety, etc. Location retired and salubrious. Grounds extensive. Surroundings delightful. Appliances complete. Charges reasonable. Electric cars from Fountain Square, Cincinnati to Sanitarium entrance. Long Distance Telephone 735 W.



FOR
PARTICULARS
ADDRESS

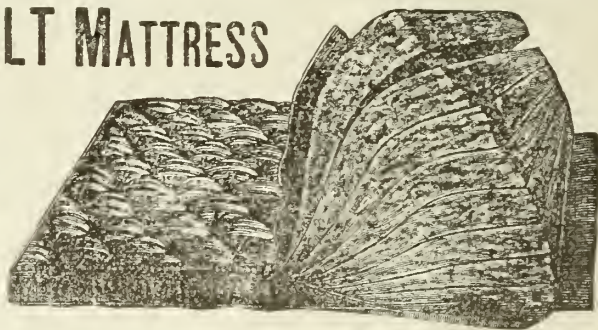
ORPHEUS EUERTS, M. D., Supt., College Hill Station, Cincinnati, Ohio.

ELASTIC COTTON FELT MATTRESS

MANUFACTURED BY

The Springfield Mattress Co.

Indorsed by leading Physicians as the most practical and satisfactory Mattress for hospital use. Ask your furniture dealer for them or write direct to us.



THE SPRINGFIELD MATTRESS CO., SPRINGFIELD, ILL.

MEDICAL STENOGRAPHER

LILLIAN M. BOYNTON.

Prepared to give special attention to all forms of Medical Stenography, embracing editing and typewriting of manuscripts, correspondence, copying, etc.

Lowest Prices, either by hour, day, or at irregular times.

TELEPHONE, GRAY 655—3540 CALUMET AVENUE. CHICAGO

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Chartered by the University of the State of New York.

THE OLDEST POST GRADUATE SCHOOL IN AMERICA. Organized in 1881—Opened in 1882.

For particulars write to DR. W. R. TOWNSEND, SECRETARY, 214 EAST 34th STREET, NEW YORK.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 3.

Springfield, Ill., August, 1903.

{ SUBSCRIPTION
\$3.00 A YEAR.

TRACTION INJURIES OF ARTERIES.*

BY S. M. WYLIE, M. D., PAXTON.

Thrombosis of the large arterial trunks of the extremities caused by over stretching or contusion of the vessel walls, followed by distal devascularization and death of the part, is of sufficiently frequent occurrence, and such grave importance, as to demand greater consideration than is now accorded it by writers of surgical text books. It is a condition that is frequently overlooked, or not apparent to the surgeon at the time of the first examination, and if fracture dressings are applied, and gangrene of the part follows as it often does after such injuries, the unfavorable result is ascribed by the laity to the unscientific application of the dressings, rather than the true cause—occlusion of the nutrient artery by a fibrinous clot. The accident has been, therefore, the cause of many unjust civil actions instituted against surgeons in the past for results they are not responsible for, and the meager literature on the subject afforded but slight means of defense, in explaining the unfortunate occurrence and establishing their innocence.

A better knowledge of the subject is necessary, therefore, not only for our own protection, but what is of greater importance in enabling us to recognize its existence when it does occur, that prompt surgical interference may be instituted in appropriate cases necessary to save life.

Thrombi of a propagated character, caused by foreign bodies introduced into the lumen of the vessel for the purpose of producing coagulation; inflammatory and degenerative changes in the vessel walls; micro-organisms and their products; fragments of tumors; heart valves; parasites, etc. have furnished a fruitful field for study and experiment in the past, but thrombosis following over stretching and contusion,

producing rupture of the inner tunics of the vessel without apparent injury to the outer adventitious coat, opens a field for further experiment and observation. The degree of resistance of vessels to traction injuries can only be determined by carefully measured force applied to those of various sizes and different ages, and noting the behaviour of the blood stream in them, which we will make the subject of further inquiry.

Blood vessels, those of larger caliber present anatomical characteristics to be remembered while studying the results of their injuries. The internal tunic, the *intima*, composed of nucleated oblong squamous epithelium has no blood vessels of its own, and receives its nutrition from the middle or muscular tunic to which it is closely adherent and very firmly attached. The middle or muscular tunic, is composed of nonstriated muscular fibres both longitudinal and circular which may elongate or retract the vessel, and modify its lumen by dilation or contraction, and thus regulate the volume of the blood stream. The *adventitia* or external tunic, is a tough membranous coat composed of fibro cellular tissue with fibres arranged in an oblique, transverse and circular manner so as to re-enforce its walls in every direction. It is elastic, resistant, sensitive and very vascular supplying the two inner coats with their blood supply.

That age has a modifying influence upon the tensile strength and resistance of vessels is obvious, and that greater force will be required to produce loss of structural integrity in the vessels of the young and those whose vessels are healthy than it will in the aged, or those whose vessels have undergone atheromatous changes; or where inflammatory or other destructive processes have weakened their resistance, is equally evident. It is a fact that we have such accidents occurring most frequently in subjects past middle age, where the force seemed insufficient to produce serious injury to the underlying part,

*Read at 53d Annual Meeting, Chicago, May 30, 1903

and often no external manifestations were present to point to their existence.

Primary thrombi of traction origin of the axillary, femoral, brachial, and popliteal, are formed at the seat of injury, or in close proximity, and their cause can usually be readily discovered and easily explained. Their existence after injuries is due to the well known characteristic of the blood to form fibrinous clots when stasis partial or complete occurs in the blood stream within the vessel, and the manner of their formation has been in the past a source of considerable difference of opinion. Injury of the endothelium of the *intima* and curling of this upon itself in the lumen of the vessel acting as a mechanical obstructant, slowing the stream and favoring coagulation, has been considered a sufficient explanation for their production in the past. Against this theory, Osler in his Cartwright lectures in 1886, contended that mere severance of the endothelium of the vessel alone was not sufficient, for if it were, we would have thrombosis in aneurysms; on heart valves; vessels having atheromatous ulcers, in all of which conditions they are of infrequent occurrence. Others contend that thrombi are formed only when a foreign body is lodged in an artery to which the blood adheres, or this supplemented with an infection causing death of the cellular elements of the blood; but Gluck, in 1897 exploded the theory formerly prevailing that lesions of the endothelium alone necessarily lead to thrombosis by showing that arteries and veins could be successfully sutured, provided the procedure was aseptic, a fact proven by Murphy in his experiments upon artery anastomosis in the same year.

Senn, Rokitansky, Kocher, Duplay, Leamy and others, have proven conclusively by experiment, that primary occlusion and adhesion of the endothelium of the *intima* can take place in aseptic ligaturing of vessels without thrombus formation, so that something more than rupture of the *intima*, and arrest of the blood stream as we have in ligation of the vessel is required. I am convinced that this additional causative factor, is rupture of the longitudinal and separation of the circular fibres of the vessel wall, re-

sulting in partial paralysis and interfering with its retractile and contractile power, is the chief agent in slowing the blood stream, which all admit, is one essential and all important factor in thrombosis formation; the other, some element in the blood that favors coagulation ascribed to fibrinogen and paraglobulin, liberated by destruction of the leucocytes, but shown by Bizzazero, Hayem, Osler, Kemp and others to be the disintegration of a chemical element, a soluble substance, active in coagulation, probably a fibrin ferment found in blood plaques. The latter so long as the circulation is active, remain in the central portion of the blood stream and adhere neither to each other or the vessel wall, but when from any cause, the current is obstructed and slowed, this natural disposition of the cell is disturbed, and the plaques tend to collect at the periphery, and aggregate in groups at any point which has been injured and deprived of its epithelium, thus a laminated clot may form at any point in the vessel where the current is impeded, and gradual, partial or complete occlusion follow. But I believe on the other hand injury of the coats involving the entire circumference of the vessel and disturbance of the normal relation of its internal coats results in annular obstruction and rapid occlusion by rapidly organized thrombosis, with all its dangerous consequences.

Effects—The result of such complete obstruction in the large main trunks that act as the chief nutrient supply of an extremity, depends upon the rapidity with which the circulation is arrested, the rapidity with which a collateral circulation is established, and the subsequent behaviour of the clot. In most cases of apparent obstruction there may be return of circulation to the extremity in a few hours, in a few days, and it may be delayed two or three weeks. In a case recently shown me by Prof. Senn of the Presbyterian Hospital there was fracture of the left clavicle and traction injury of the right axillary artery, with absence of pulsation of the vessels below the seat of injury for six days, and then gradual restoration of the blood supply. In some cases the pulsations are so feeble, as to escape detection, and leave

the impression that they are totally absent, in which there has probably been overstretching of the muscular coats with but slight injury of the intima producing only partial obstruction of the blood current by mural thrombus, in which later, the process of organization and absorption with complete or partial restoration of physiological function of the vessel have occurred. A case from the Middlesex Hospital Reports of 1894 is in point, where an injury of the femoral artery two inches below poupart ligament, by passing of a cart wheel over the leg, there was absence of pulsation in all the vessels of the leg below the seat of injury for nineteen days, with restored circulation; and a similar case, reported by Bryant, in a man 36 years of age, circulation was not reestablished below the seat of the injury for three weeks. On the other hand cases are reported by Keeling, Mudd, Jungst, Potherat, Brunner, Chwolzow, Vincent, Jackson and Wharton of obstructive thrombi of the brachial and popliteal arteries where life was saved by amputation above the seat of the injury; and death reported from injuries to the same vessels where amputation was refused or postponed until septic processes had become established by Kammerer, Dierterlin, Whorton and others.

Thrombi may disappear by, (1) absorption, i. e., organization and connective tissue formation caused by endothelium covering and enveloping the thrombus, nutrition being furnished by branches from the vasa propria penetrating the intima and media, the fibrous net work of the blood clot acting as a frame work for the development of the elements. The phenomena of organization in such cases is rapid beginning the first day, by modification of the endo-thelial cells, the capillaries appearing about the third or fourth day, and the connective tissue about the ninth or tenth day. The degree and extent of traumatism of the vessel influencing the extent and rapidity of organization, infection of course modifying or delaying the phenomena; (2) by simple softening; (3) Puriform liquifaction.

Forms of Force—(1) Direct force as from flying object; passing of cart wheel over arm or leg; (2) by over stretching as when clothing of arm or leg is caught in machinery and

the muscular resistance of the body acts as a counter extension; (3) Forcible over extension in those forms of violence when the body is thrown to the ground with great force with limb extended; (4) by combined extension and contusion in dislocations and fractures where the head of the bone, or fragment of a fracture is forced against the vessel without producing rupture of its external coat.

Diagnosis—In every case of injury to an extremity, subject to traction or contusion force, the circulation of the member should be carefully noted, and if there is absence or feebleness of arterial pulsation, a careful inquiry should be made to determine if possible its severity and locate its seat. Setehoscopic examination should be instituted along the exposed course of the vessel, to determine if possible the presence of adventitious sounds, which as Von Wahl has observed in partial severance of the arterial tube when the blood flows past some obstructant, intermittent grating sounds are perceptible upon auscultation, more distinct at the seat of injury, extending in both directions, but always further in the direction of the blood course. In many cases where the obstruction is formative, pulsation with various degrees of feebleness or force can be determined below the injured point which when occlusion becomes complete disappear entirely, and with complete arrest of circulation coldness and pallor of the surface are more evident. Later the shriveled bulbar eminences of the fingers and toes, easily detached corium, and echymoses of the skin, give unmistakable evidence of death to the part. Several cases of injuries of the character under consideration, will illustrate the importance of early diagnosis, and prompt interference, as well as the disastrous results of neglecting both.

Case I. Man 58 years old caught in a loop of a rope used on a well derrick, loop encircling the calf of the leg and suspending the patient clear of the ground with entire weight of body hanging by the leg. Injured member treated by heat and friction for four days. Injury of popliteal and gangrene of the leg below the knee. Amputation refused until the septic chill ensued, when operation was permitted, followed by death

in a few hours. In this case while there was no dissection made of the vessel, the nature of the injury was such as to leave little doubt of its being due to thrombus from a traction injury of the popliteal.

Case II. Traction injury of axillary produced by patient having coat sleeve of right arm caught in the roller of a sugar cane mill patient throwing his body to side and bracing himself against frame work to prevent arm from being drawn between rollers. I saw case in consultation fourth day after accident, when I found gangrene of the entire arm with but slight oedema, patient delirious, with high temperature, feeble rapid pulse, presenting all the evidence of a general septic infection, slight extravasation and discoloration in axilla, no evidence of injury of the vein, patient died during my visit without operation.

Case III. Traction injury of popliteal, accompanied by fracture of femur above condyle, by being caught under part of a load of wood caused by breaking of forward axle of wagon. Under observation for six days. First four hours pulsation of posterior tibial feebly discernable, dorsalis-pedis, imperceptible, disappearance of posterior tibial pulsation within a few hours. Probable character of the injury explained to the patient and friends, and amputation advised, but stoutly refused by all the parties. Gangrene rapidly supervened. The case was left under the care of the family physician for five days longer, when the odor of decomposition became so unbearable in spite of antiseptic dressings and deodorants, that both patient and friends consented to its removal. Another surgeon was sent for who amputated the leg at the junction of the middle and lower third of the femur, death followed in a few hours. Popliteal artery seat of decomposing thrombus.

Case IV. 52 years old, fracture of femur above condyle by falling from top of load of hay upon the frozen ground. Right leg extended, quick disappearance of pulsation of dorsalis pedis and posterior tibial, fracture of femur above seat condyle without rupture of artery. Amputation 48 hours afterwards above seat of injury with recovery. Organ-

ized class of Popliteal artery 2 1-2 inches long.

Case V. Patient 58 years old, Fracture of left leg above condyle of femur traction injury of right popliteal artery without fracture by being being thrown from a buggy. In this case concurrent testimony of the attending physicians was, that feeble pulsation could be felt in the posterior tibial for two days. At the time I saw patient in consultation on the third day, pulsations were not only absent but evidences of approaching gangrene so apparent that I advised immediate operation. Some disagreement about the necessity for such hasty interference preparations were made for the operation, and Prof. Nicholas Senn of Chicago was summoned in consultation. His prompt decision in the matter left no alternate but immediate amputation. A Gritti-Stokes amputation was performed resulting in primary wound healing and recovery. Dissection of the popliteal artery showed it to be the seat of an obstructive thrombus three inches long without injury or rupture of the external tunic.

In some such cases Leverance of Bucharest recommends that to insure patency of the vessel above the point of section, a probe or filliform bougie be passed up into the lumen of the vessel to dislodge any thrombi present, and facilitate their expulsion by the blood stream, by slight release of the constructor, a process which I think is objectionable because unless you are sure you have severed the artery at the point above the seat of injury there is liability of an ascending thrombus, as well as the added danger of secondary hemorrhage from failure of the ligature to hold in a diseased vessel wall.

Treatment—Rest, immobilization without construction, external heat and careful watching for evidences of return of circulation; until artery resection and suturing of the entire circumference of the vessel, becomes a more practical procedure than it is at present, it offers no hope of overcoming this difficulty. When death of the member is assured by the evidences of complete arrest of nutrition and impending gangrene, amputation above the seat of injury of the vessel,

is the only alternative left for the surgeon, and the only hope that he can offer the patient.

References:

- Park, Surgery by American Authors.
 Murphy, Med. Record, Jan. 16, 1897.
 Middlesex Hospital Report, London Lancet, Dec. 1, 1894.
 Bryant, London Lancet, July 16, 1881.
 Keeling, Med. Press and Circular, May 14, 1888.
 Mudd, Weekly Med. Review, Feb. 18, 1888.
 Jungst, Berlin Klin. Wochenschrift, 1884, Vol. 21, p. 225.
 Poterat, Bull. de la Soc. Automique, March, 1888.
 Brunner, Deutsch fur Chirurg, 1887.
 Chlwozow, Chirurgitskij westnik, St. Petersburg, Dec. 1, 1892.
 Vincent Jackson, London Lancet, 1887.
 Whorton, Med. News, 1886. Vol. 48, p. 345.
 Dieterlin, France Medicale, 1882. Vol. 1, p. 854.
 Edward vonWahl, Deutsch Zeit f. Chirurg, 1884, and St. Petersburg Med. wochen, 1884, p. 188.
 Severance, Le Progress Medical, Aug. 11, 1894.

THE LEGAL STATUS OF THE DOCTOR.*

BY HERBERT C. JONES, M. D., DECATUR.

Ours is supposed to be a learned profession and the physician is credited with being a man of much general information, but it is a sad fact that few among us have any clear conception of our legal rights and responsibilities; or in other words we are like necessity in that we know no law, and it is largely on account of this deficiency that many of us are prone to do business in our wife's name so far as the holding of real estate is concerned.

It is no part of my purpose to controvert the adage:—"A man who is his own lawyer has a fool for a client," but in the same sense that a knowledge of hygiene and physical culture saves many a doctor bill a clearer insight into our relations with the public may save us no end of trouble and expense.

With these thoughts in mind I have endeavored to collect an array of facts bearing on the legal status of the doctor. Not that the law as it relates to us differs from its bearing on the laity, but the nature of our calling brings us into such delicate and un-

usual relations to the public, and we are so absorbed in pathologic and therapeutic research, that we need to be reminded of rocks and shoals, which may be the means of wrecking an otherwise successful career.

With such a subject it is superfluous to admit a lack of originality in my paper. Much even of the language has been copied from decisions and opinions, lest an attempt to paraphrase might befog or cloud the meaning.

The law's two great divisions are common or unwritten law and statutory enactments.

The common law of this country was taken from the English common law, which had existed since the time when "the memory of man runneth not to the contrary," early in our colonial history, being modified only as necessitated by our differing conditions.

Whenever there are no statutory enactments bearing on a question at law it is governed by the common law interpreted and elucidated by decisions and opinions rendered by the various courts, especially the Appellate and Supreme Courts of the various states and the United States.

Naturally the first point for treatment as bearing on the legal status of the doctor is the right to practice medicine. Under the common law this right is no way abridged or limited, but nearly if not quite all of the states have legal enactments bearing on this question and our own state, always progressive and to the fore, has been among the leaders in this direction. It is not necessary in discussing this subject before a body of Illinois physicians to detail the requirements for practice in our own state; suffice it to say that since most of us have been licensed the standard has been raised and under the work of our vigilant committee on medical legislation is likely to be still further advanced. We all rejoice at this not because we want to build a Chinese wall around the profession of the state, nor to shut out any worthy practitioner, but because we are proud of the medical profession of Illinois, and want to see it made if possible without peer and without reproach.

It behooves the practitioner to know that he has complied with the requirements of

*Read at 53d Annual Meeting, Chicago, May 30, 1903

the state or states in which he wishes to practice for the very obvious and important reason that without such strict compliance he may not collect any fee for services rendered nor even for appliances furnished. This ruling is based on the generally recognized principle that a man may not demand compensation for services rendered by the commission of a misdemeanor. The only exception of which I am informed is in a decision of the Court of Appeals in Missouri, where it was held in the absence of statutory provision prohibiting such collection the action was valid, even though the party proved himself to have committed a misdemeanor in establishing his right to recover. A decision of a justice of the Supreme Court of North Carolina comments unfavorably on this decision and concludes by saying: "for the law would be false to itself if it allowed a party through its tribunals to derive advantage from a contract made against the intent and express provision of the law."

To physicians who are called into neighboring states it is important that they should know and conform to the requirements of said states. Many states permit certain liberties to non-resident practitioners. For instance the states of Connecticut District of Columbia, Maryland, Kentucky, Maine, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island and Wyoming, accord to non-resident physicians the privilege of practicing within their borders, but they are not permitted in any case to open an office or have a place for meeting patients generally, without compliance with the requirements for registration and in Kentucky, Maine, Massachusetts and Rhode Island the non-resident physician's visits are limited to a particular case. It is expressly provided in twenty-four states that legally qualified physicians and surgeons from other states may meet in consultation resident physicians.

For the benefit of those whose practice may extend into adjoining states I have summarized the principle requirements of the states of Indiana, Michigan, Wisconsin, Iowa, Missouri and Kentucky. With the

three states Indiana, Michigan and Wisconsin, reciprocity relations have been established by our state board so that its licensees may acquire the right to practice in those states easily.

In Indiana a diploma and examination are both required. The fee is \$25.00, good for a second examination within twelve months.

In Iowa also, diploma and examination are required. The fee is \$10.00, good for re-examination.

In Michigan* diploma from an accredited school, a list of which will be furnished applicants, is accepted in lieu of examination. Fee for the latter is \$10.00.

In Missouri an examination only is required and a photograph of the applicant must accompany the application. The fee is \$15.00, and includes re-examination in the event of failure.

In Wisconsin an examination and diploma both required. The fee is \$10.00 and \$5.00 additional if a license issue. In this state also there is an excellent provision that if a licensee is convicted of a crime pertaining to his professional conduct, in any court of the state, the judge is authorized to revoke his license in addition to any other penalty inflicted. Collection of compensation is also expressly prohibited from one not registered, and it is an offense punishable with fine for one unauthorized to use the title Dr. or its equivalent on sign, door plate, &c.

In Kentucky diploma from accredited school alone is required and the application may be made by mail. The fee is only \$2.00.

In Illinois a physician whose practice extends into another county must have his license recorded in that county also. Emergencies are excepted but must be proven to exist.

A physician cannot be prosecuted for unlawful practice because the Board granting license was irregularly appointed or unconstitutional. Such a Board would be a de facto board and license issued by it would protect the holder. It is no defense, how-

*The Michigan law has been modified since this paper was prepared.—H. C. J.

ever, that the board acted improperly or unlawfully in refusing to grant him a license.

The law permitting a board to revoke as well as grant a license has been questioned on the ground that it was exercising a judicial function which belongs exclusively to the court, but such objections have been universally held to be not well founded. The ground on which the statute usually bases the right to revoke are "unprofessional, dishonorable or immoral conduct." The word unprofessional is not here used in an ethical sense, but is held to be synonymous with dishonorable. From an ethical standpoint it is unprofessional conduct for a physician to advertise himself or his business, but under the statute he may do so unless the advertisement contains false or misleading statements for the purpose of deceiving the public, (as we well know they usually do.)

The policy of the law to guard against injustice in the matter of revocation of license makes it necessary that the physician be given notice of the charge against him and of the time and place of its hearing as otherwise it will be declared null and void on appeal and he will be protected in his right to practise pending the appeal.

Having complied with all the requirements and being armed with a duly recorded license to practice does not relieve us of all anxiety and trouble any more than the possession of the long coveted diploma opens the elysian fields of the under-graduates expectations. "Whenever a physician or surgeon undertakes the treatment of a patient certain contracts are created by the law founded upon the relations of the parties." These exist independent of our knowledge or volition.

In legal phraseology contracts are either express or implied. If the particulars are averred and mutually agreed upon it is said to be an express contract. This may be either written or oral; with witnesses or without; and, except where by special enactments written contracts are required, all forms are equally binding. The only difference is the greater ease with which the exact agreement may be shown in written or witnessed contracts. Where no particular terms

are set forth the law will take into consideration the relation of the parties "and will, by implication, create for them such an agreement as reason and justice would dictate." The contract is then said to be implied. Such contracts do arise from nearly every transaction into which we enter.

The physician on his part contracts with the patient whose case he has undertaken that he is possessed of such skill science and information as will enable him properly and judiciously to perform the duties of his profession. He is required not only to *possess* these qualifications but to exercise proper, reasonable, ordinary skill and care in the *application* of them to the case in hand.

Furthermore, the law in any given case has due regard to the advanced state of progress in medical learning at the time. For instance it is stated that if a patient's physical condition was such as to render it unsafe to put him under an anaesthetic for an operation on the eye, it would be evidence of culpable negligence and want of skill to use other than local anaesthesia, although only twenty years ago the use of chloroform was upheld, and would have been justified in such a case.

The physician's liability is in no wise mitigated or relieved by reason of the fact that the services were gratuitously rendered. He may it is true refuse to render services to a person who is unable to compensate him, but having undertaken the case he is alike responsible to the pauper as to the millionaire.

He contracts, not only to use his best judgment but to follow established modes of treatment. If he experiments with some other method he does so at his peril and if deleterious results follow he must satisfy the jury that he had a good reason for the faith that was in him. He is also bound to give proper advice and instructions to the nurse and attendants both during his attendance and for the after treatment, though he is not bound to anticipate and provide against improbable conduct on the part of the patient.

Fortunately for us, perhaps, in the absence of express agreement so to do there is no

obligation to effect a cure or even benefit the patient, so long as a reasonably skillful effort is made.

It is presumed when the physician assumes charge of a case that he will render all the attention needed until the termination of the case.

He may, it is true, by special contract in the beginning, limit his attention to a longer or shorter period and he may at any time discontinue his attendance by giving reasonable notice of his intention so to do; but if he does not so limit his attendance by express contract or give such reasonable notice he is bound to continue his visits as long as the requirements of the case may demand.

A physician's contract to furnish medical services for a certain period of time to certain persons or a person, there being no express understanding that surgical services are excluded, calls for the performance of needed surgical operations under the contract, as well as ordinary medical treatment.

It is generally recognized that knowledge which comes to a physician in a professional way he is bound under his contract with the patient not to divulge. Knowledge of this sort is technically known as "privileged communications," and so sacred is this obligation regarded that in many states the physician is not required to disclose the same in a court of justice without the patient's consent.

A physician who is careful to bear in mind the foregoing duties and obligations and be governed by them is not very likely to be involved in any malpractice suits or at least not likely to have any damages assessed against him.

While, as was stated before, a physician's obligation to continue his services as long as the case demands is well established it also follows conversely that the patient is liable for all the attendance rendered even though he only authorized the first visit. He is also liable, in the absence of an express agreement to the contrary, for the fees of consultants; and it has even been held that such express agreement will not release him from liability unless it was so understood by the person rendering the service,

though he may afterward recover from the attending physician under the agreement. The rule is based on the presumption that he gets the benefit and consented to the calling. This rule governs also in the attempt to evade payment under the plea that the patient did not call nor authorize the calling of a medical attendant, because it is a general principle of law that when a person avails himself of the benefit of services done for him without objection or protest he is presumed to promise adequate compensation for them.

The patient is bound to obey reasonable instructions and his failure to do so, when proven, is a just defense in claims against the physician for injuries from unskillful treatment.

Owing to the nature of our work which comes under the classification of necessity and charity, contracts made on Sunday are binding even in states which prohibit the transaction of any business on the Sabbath day.

The rights and responsibilities of third parties are not without interest in this discussion. By third parties is here meant any interested parties other than the patient. These persons have rights concerning which the physician should be advised, and also liabilities a knowledge of which may inure to the doctor's benefit.

While a parent is bound to provide maintenance for minor children it is sometimes a question how far he is liable for necessities furnished same. When the services are rendered with the knowledge and consent of the parent, there can be no question of his liability, but no action can be maintained where even necessities are furnished without the consent, express or implied, of the parent. Consent will be established, however, on very slight proof. If the child is away from home at school, or even at work, with the father's approval the latter is liable for medical services, even though the child is supporting himself.

On the death of the father the mother becomes the head of the family, but she is not equally liable for the debts of the minor

child. If it inherits any estate that estate is liable first, and not the mother.

In case of divorce or separation of the parents circumstances will govern the liability. If the separation is mutually voluntary the father is liable even though the custody of the children is with the mother, but if she leaves her husband without just cause and against his will, and takes the children with her, he is not liable because her custody of them is unlawful, but should the courts by decree give her the custody, then it is lawful and he becomes liable for their necessities.

When the child becomes of full age parental liability ceases, even though living in the parent's home. He may become liable by implied or express agreement but only the same as a stranger would under like circumstances.

The liability of the husband for necessities furnished the wife is much more certain. In the former case there is some question of the authority of child to bind the parent, but in the case of the husband and wife there is no such question, and unless they are living apart from misconduct of the wife, or against the husband's will, almost the only question that may be raised is whether the services were really needed. A physician attending a woman supposed to be a wife can collect from the man holding himself forth as a husband, even though they are not in fact married.

The master is not bound to pay for attention rendered the servant, though if the physician is called by a master to attend a servant in his employ it has been held as an implied agreement to pay. If, however, the calling is by the master's wife, he is not bound even though she assures the doctor her husband will pay, unless it can be shown that he gave his consent to the same or subsequently ratified the agreement.

Owners of vessels are liable for the care and medical treatment of seamen who become sick or disabled while in the performance of their duties. The extent of the period covered by this liability is subject to question. Sometimes it is held to apply only

to the period covered by the voyage or time for which they were employed.

Under a general statute existing in most of the states, when a third party not naturally liable assumes liability, the agreement to be binding should be in writing and signed by the party assuming liability, but the language of the agreement may put him without the pale of this statute. For example, if he should say "If the patient does not pay you I will," it is not binding unless in writing, but if he says "Attend such a patient and I will pay you," then he is bound even if the agreement is not in writing, for in such case he does not agree to answer for the debt of another but makes the debt his own. If *after the services are rendered* a third party says, "I will pay the bill of," it is not binding whether written or verbal. This is because all valid contracts must be based on some good or valuable consideration. This need not be money. If you will attend the case I will pay you, is a binding obligation, and the physician's consent to render the service is the consideration. This consideration does not exist for the third party after the service has been rendered. If the physician refuses to attend longer unless he be paid for past as well as future services, then there would be a consideration; or an agreement not to bring suit or the withdrawal of a suit already brought would be consideration enough to bind a verbal agreement to pay.

The calling of a physician does not in most states imply any liability to pay. The liability of corporations for services rendered an employee depends on whether the physician is called by an agent having authority to bind the company, or the employment is subsequently ratified by a person having such authority. An agent who exceeds his authority may render himself personally liable in damages thus occasioned to one of the contracting parties, but it is a rule of law that a man dealing with an agent is bound to know, at his peril, the extent of the agent's authority. A president of a railroad would have authority to bind his company and it has been generally held that a Superintendent has such authority. A Divi-

sion Superintendent or a General Agent and Manager has been held to have such authority in the case of an employee but not passengers. An agent, employce, or any servant of a company if properly authorized and acting according to his instructions, may bind the company for the services of a physician or surgeon rendered at his request, but it seems well settled that the authority to employ a physician is not included in the general powers of conductor, roadmaster, or station agent, by virtue of his office or position. An exception is made to this in Indiana for emergent services only, but no other state has this provision.

When a company employs a physician and reserves the right to determine what is a reasonable compensation, the doctor would not be allowed to recover a greater amount than that fixed by the company.

It has already been stated that the husband is under almost any circumstances liable for the expense of treatment of the wife, and it follows naturally that he has some rights which must be respected. In a surgical case where an operation is required it is the part of prudence at least to obtain the husband's consent before proceeding with the operation. It is true there may be an implied consent to do whatever is needful when the patient's case is placed in the hands of a specialist. The operation cannot be done without her consent, but that is presumed unless she has been the victim of deception, which is a material fact to be proven.

The law recognizes the husband's right to the society and services of his wife so the doctor is liable for any deprivation of this right by reason of improper care or inattention in the management of the case. He is also entitled to have the body in the condition it was at death, so that, barring official investigation under the direction of the coroner no autopsy may be made without his consent. The same is true of the parent and minor child, and in other cases the right may extend to the next of kin. It has been claimed that the property of third parties may not be destroyed in the disinfection of premises after contagious diseases,

but the decision of the courts have again and again sustained the physician in doing whatever is needful even to the destruction of property, and he can only be held responsible for or restrained from wholly unnecessary or willful destruction.

The amount of fee which a physician or surgeon may recover is a matter of fact and not of law, but the rule is that for ordinary services the amount is governed by recognized custom in the locality, or if the doctor is called from a distance then the custom of the locality from which he comes with added expense for loss of time and cost of coming. But in case of peculiar or unusual services no such general rule holds and an equitable amount will be fixed after taking into account the attendant circumstances.

As has been stated the patient is liable for the fee of the consultant, and even an agreement that the attendant will pay does not release him from liability to the consultant unless it can be shown that the latter had knowledge of the agreement before the service was rendered. Repeated visits of two physicians, even though they meet at the same hour by agreement, cannot all be charged for as consultations like the first one.

That no benefit was derived by the patient is not a bar to recovery for services as the court stated in a Pennsylvania case: "The fact that a professional man does not succeed in accomplishing that for which he is employed, cannot affect his right to recover for services rendered, unless actual want of skill be specifically shown."

Whether the custom of rendering services gratuitously to each other exists merely as a courtesy among physicians, or is so universal as to bar claim for compensation, has been held by the Supreme Court of Georgia to be a question of fact to be determined by evidence, unless of course there was an understanding that the services were to be gratuitous.

It was not until the reign of Queen Victoria that the common law of England recognized the legal right of a physician to recover compensation; it being held that his services were of such an exalted and honorable character that it would not encourage

the suspicion that they had been rendered from mercenary motives. In this large and very free country, however, the laborer is deemed worthy of his hire, even though he be a doctor, and no such question could be raised.

When a doctor seeks compensation for his services he first makes a demand by presenting his bill, but if payment is refused or unreasonably delayed it is well before taking legal steps to know what the legal status of the doctor will be in the courts. It is well settled that unless there has been strict compliance with the requirements for practice he cannot legally enforce collection of his fee—at least not in any other state than Missouri.

The doctor's right to practice being settled, and it will be presumed until disproven or at least disputed, we must next observe whether the account is barred by the statute of limitations, or whether the patient would be willing to plead such a defense to defeat recovery. This "statute of limitations" varies, but in this state it is five years for an open account and ten years for a note or written obligation.

If the account consists of a single item it is easy to determine whether it is within the prescribed limits, but if it is a running account the rule in Illinois is (according to my best information) that the last entry, either charge or credit, fixes the age of the account, and this is the rule in most of the states. Louisiana, Texas, and New Hampshire, consider the statute as running against each item from the date of its entry.

The necessity of better bookkeeping than the average busy doctor practices is manifest in collecting a disputed account. In most of the states, and certainly in ours, the only book admissible in evidence is the book of original entry. If the items are kept on slips of paper the first book into which they are transcribed will be the book of entry. This may be brought into court to refresh the doctor's memory if the entries are in his handwriting, or the clerk's who made them, and they may be also offered in evidence if easily understood.

There is no presumption of law as to the value of a doctor's services, nor that a jury is competent to fix it without testimony of some kind from persons knowing something about such value. The doctor is a competent witness to the value of his own services, and he may introduce other physicians to corroborate his estimate, and where such evidence is given with none offered to contradict it the jury may not form an independent conclusion but must find according to the evidence offered. The rule has been laid down by the Supreme Court of Louisiana that where the witnesses differ it is correct to allow the lowest estimate.

In collecting accounts from an estate the claim should be filed at the time specified in the notice, and it must be filed or presented by the person who owns it or has an interest in it, or his lawfully authorized agent. It should be presented in writing with as much particularity as possible, and if a note, a copy of the same should be attached. The claim should always be verified by affidavit of the claimant or doctor before an officer authorized to administer oaths. Should the claim be disallowed action must be brought against the administrator or executor within a short period ranging from three months to a year, or all rights will be barred.

The advisability of pushing a claim against an estate depends on its solvency. If solvent all proven claims will be paid in full, and if not they are paid in classes; all claims in the first class being paid as nearly as possible in full, and claims in subsequent classes in their order. Attendance in last sickness ranks higher than ordinary account, coming in the third class while the latter comes in the sixth. The first class of course is funeral expenses, and next expenses of administration and debts of record. If an estate does not pay in full, the class to which a remnant reaches is paid pro rata, the balance. As a husband is liable for the treatment of his wife the bill should be against him rather than her estate unless he is without property.

In proving an account against a deceased person or one who is mentally unsound there is one difficulty, and that is a physician may

not testify but can only introduce his book of accounts, or prove it by introducing other witnesses who have knowledge of the transaction out of which the indebtedness grew.

I have not thought it best to go into the subject of malpractice suits to any extent but it is an interesting and disputed point whether a doctor's failure to possess or apply proper knowledge and skill in the treatment of a case precludes his recovery of compensation for the services. In New York it has been held that it does, and the Supreme Court of Maine expresses a like opinion and declares that: The same facts which would authorize a suit for malpractice would constitute a defense in a suit for compensation. This raises the question what would the effect be on a malpractice suit for the doctor to obtain a judgment for his fee in the case. It is said to be a general principle of law that "*a judgment of a court of concurrent jurisdiction directly upon a point is a bar to an action upon the same point and between the same parties in another suit.*" The Court of Appeals of N. Y. has applied this doctrine to its fullest extent. In the instance quoted suit was brought for five thousand dollars for unskillful and negligent treatment of a dislocated elbow and fractured arm. The doctor then brought an action before a justice of the peace for the recovery of his fee from the patient, who was the plaintiff in the malpractice suit. The patient appeared but interposed no defense, and judgment was rendered against him for the small sum of six dollars and fifty-eight cents. The doctor then as a defense to the patient's action for damages from malpractice set up the judgment rendered by the justice. Upon the principle above given the Supreme Court and the Court of Appeals held that this small judgment was a complete bar to the action for damages, and this view has been upheld by the courts of some other states but not all. I am not able to learn that our state courts have passed upon this question but I know it is the custom of certain very shrewd practitioners when threatened with a malpractice suit to push forward a suit for compensation, believing that it will at least give them a better stand to have collected

their fee before the other case comes to trial. Should our courts sustain the position of the courts of New York and Maine we will all have to learn to follow the amended Golden Rule which may be paraphrased thus: Do unto the other fellow what he intends doing to you, but do it first.

Discussion.

William M. Harsha, Chicago: In the first place I want to say that I think the legal recourse of patients is salutary. I had read an abstract of the doctor's paper, and had a little talk with him about it, and I think he has made an estimable statement of the status of the doctor in general, and I believe we do not appreciate the fact fully that it is a good thing to have these restrictions thrown around us. We might compare this to the practice in a small community, and the practice in a large community. If we are practicing in a small community, and have nobody to criticize our work or call us down, or to oversee the case, we are not so apt to exercise that due care which is consistent with the best kind of practice, so that if we are brought up with a round turn sometimes, although it is not appreciated at the time, still it has a general salutary effect, I believe the legal status of the doctor, so far as the questions have been passed upon, is good. As a matter of fact the records in Illinois show very, very few judgments entered in malpractice cases, and show a reasonable attitude in aiding the physician in enforcing the claims, monetary and otherwise, while his status in Society, and in the community is all perhaps that he deserves.

In regard to one of the later points brought out, the limitation of bills, as I understand in our community, we can date the life of the bill, or date its validity from the last payment, or the last promise to pay. Is that right, Mr. Cameron?

Mr. Cameron: That is substantially correct.

Dr. Harsha: It has been my practice for some years to write to patients after I had several bills sent to them, and it very often happens that within a few months after writing to the patient about it, he will write a letter in which he will acknowledge the claim, and apologize for not paying it. That is the usual thing. I get these letters, and I have a pigeon hole in my desk that I label "Letters of Promise." I put these letters in there, and so, on more than one occasion I have had the benefit of their promise to pay the bills at some future time. There is always an implied contract when we undertake a case, and along the line of what I said at first, that these laws are salutary, I believe there are a great many cases where patients could recover damages where they do not. I think doctors are sometimes, and not infrequently, careless. We start in to treat a case, and maybe we are busy, and the next day we forget it. Of course the law assumes that we are the proper judges of how often a patient should be seen, and so our status in that respect is good, but it very often happens as a matter of fact, if we did

not have that recourse, and could not fall back on the legal status, and claim that it was not necessary to visit the patient, or do more than we did, we might be liable to censure a good many times more than we are.

I think this kind of a paper is most wholesome because it calls attention to this one thing, that we are under contract with the patient whenever we undertake a case. We are under contract to give him attendance until he is well, and we are under contract to exercise good, average skill.

The only malpractice suit I ever had brought against me was like this: I was consulted in a case where a man had his leg broken and I saw the patient, with the physician who had the case, once a week for four weeks. The case was left in the hands of the attending physician who was a competent man. The man who had his leg broken was poor, and so out of consideration we said we would not make any more calls than were necessary, and if anything went wrong with the case he should let us know. I retired from the case at the end of the four weeks. After a few days the other doctor called and was met with a cold stare and was informed that another doctor had been called in. They sued for malpractice, but it never came to trial, as the other doctor said that he could not help them out in the case. That is the only reason why it didn't come to trial. The lesson from it is this, that if I take a case with another physician I will want to drop in and see that it is all right a little longer than four weeks, because, you know, the femur will sometimes bend after four weeks, and after it has become partially united. In this case the doctor himself said the union was fairly good, but it permitted the leg to bend angularly. I believe the fault was with the man, because he should have permitted us to have a consultation and correct it when it was bent.

It would have been a simple matter.

the doctor in his paper says the husband is responsible for his wife's bills. In this State I think the husband and wife are both responsible for the bills of the other. I don't know whether you said anything about bankruptcy or not. I have a stack of postal cards which I have received from people who claimed to be going through bankruptcy. I have never followed those cases up very much to learn whether eventually anything could be gotten out of them, only in this way: The collecting firm in this city that has done most of my collecting as well as the collecting of many other physicians, has secured a judgment against the wife of the man who has gone through bankruptcy, and by sending a constable to the wife, and by—I suppose annoying her, and maybe they have, they have collected some bills in that way, and in order to rid the wife of that annoyance it has happened that the husband has given his obligation to pay the account, and this, I think, is a good plan. I do not think there is any class of men who do so much work for nothing as the physicians, and there is no class of men who are beaten out of their bills so much, or who are so often called upon to cut them down; so I believe anything looking towards our standing in that respect is salutary.

As to the compensation, and the method of bookkeeping, those are points that interest us much. I am among the number of physicians who started to practice in the country, and after practicing for twenty years it is hard for me to remember that my services are any more valuable than when I started. Maybe they are not, but I think they are when I come to think of the time and labor I have put in; so that not only the experience a man has had, but also the income that he has for a certain year cuts a figure when it comes to making up his charges. I never did get but one large fee—over two thousand dollars, and that was through the executor of an estate. The bill was originally more than that. I saw a case decided in Court not very long since in which the Court held that it was a competent question to ask a man how much he makes, so that that question will come in sometimes to decide.

Our services are not appreciated anything like that of the lawyer. The lawyer who takes a case involving \$50,000 will think he is getting poorly paid if he gets anything less than \$5,000. If a train runs over a man and kills him the law says that \$5,000 is all he is worth, no matter if he can earn \$20,000 per year. Of course that law is wrong, and should be corrected, and I hope it will be at this session of the Legislature, among other interesting things that it is doing. That fact has a cheapening effect on the worth of a man's life—the fact that the statute permits a settlement with the man's family for \$5,000. If a man is only worth \$5,000, and you do something to save his life you can't charge him very much, according to the way other services are rated, but I am glad to see that in the past few years this subject has been materially advanced in this city and in other cities as well as in country places. I saw one case where the Court decided in New York City that a man who gave expert testimony there recently was allowed more than six thousand dollars for his services. All these things are educating the people. Doctors who spend their lives, and who accumulate a whole lot of books which are worth about thirty cents when they are dead, and a lot of instruments that are worth less, with nothing but their reputation, are entitled to reasonable compensation while living.

I see it is stated in the doctor's paper, and I quite agree with him, that the bookkeeping systems we have are quite imperfect. It is the doctor's fault that he does not keep his books properly, and collect his bills promptly. Many people have the idea that a doctor should not send a bill more than once or twice a year. I know a man who complained because the doctor sent in his bill before it was six months old. These are matters where we should educate the public. We have the same legal status as the merchant, and we should educate the public to the fact that we expect compensation for our services, and expect it in a reasonable time.

James A. Egan, of Springfield: Mr. Chairman—I would like to say a word or two in regard to the subjects touched upon by the doctor in his excellent paper, namely, unprofes-

sional conduct, and inter-State reciprocity. What is unprofessional conduct? What conduct do the Courts term unprofessional? These are questions which are presented every day, and are rarely answered satisfactorily. Even the Supreme Court of Illinois has not determined the question to the satisfaction of the medical profession, or the lawyers. There are some defects in the present act regulating the practice of medicine in this State, and among those defects one relates to the revocation of certificates for unprofessional conduct. The Board, from 1887 to 1898, was clothed with the same authority in the revocation of certificates as is now sought for in the present act, and yet during that whole time the Board revoked but ten certificates. Of those ten certificates, six were revoked on account of the alleged physicians having fraudulent diplomas. The others were revoked for fraud. Several years ago the State Board of Health undertook to revoke the certificate of Dr. McCoy, for unprofessional conduct. He was summoned to appear before the Board, and to show cause why his certificate should not be revoked for unprofessional conduct. It was understood that he advertised to cure diseases which were considered incurable, and made many professions to cure which he could not carry out. The Court, in considering the matter said that these advertisements were harmless in character, and that before the State Board of Health is authorized to revoke a certificate the conduct must be in short, such that would be deemed unprofessional in their judgment. The State Board of Health thereupon took a recess, and has taken it ever since.

In regard to inter-State reciprocity, the doctor referred to Indiana, Wisconsin and Michigan. There has been a federation organized by these three States, to which Illinois belonged for a while. The reciprocity proposed by that federation was utopian. These three States desired inter-State reciprocity which would enable them to recognize certificates issued on presentation of diplomas. That form of reciprocity is not good. In the present bill now pending at Springfield there is a clause which was incorporated at my suggestion, namely, that the Board should be empowered to accept, in lieu of a part of the examination required, evidence of ten or more years reputable practice since graduation. That was done in order to give more lee-way to the old practitioner, who cannot be expected, and who does not pass the same examination as the young practitioner. I consider that one of the best ways of obtaining reciprocity. In the State of Illinois we are required to subject every applicant to an examination. Michigan is not an examining State. It is a registration State. They have power to designate certain colleges, but when they have done that they must accept the graduates of that college. In Indiana and Wisconsin the laws require an examination, but the clause in regard to reciprocity is so wide that they can take in a practitioner who is licensed upon his diploma.

The State Board of Illinois through its former president, its present president and secretary, has striven for the past five years to

bring about reciprocity, but it is up-hill work. At the National Association of Examining Boards I presented the matter on three occasions. The opposition comes mostly from the East. New York says she won't reciprocate with any one. Pennsylvania says she will recognize the licenses of New York, and New York says she won't recognize the licenses of Pennsylvania. We have brought about reciprocity with Maine and New Jersey by very hard work, but not with the other States, except that we have reciprocity with Wisconsin, on examination. The State Board of Illinois hasn't power to enter into any other form of reciprocity.

W. C. Bowers: I would like to say a few words in urging medical men to a better method of bookkeeping. Some use marks which signify a visit, or the giving of medicine, and so forth. I have tried various methods. I first tried the marking method, but did not like it. I then was at sea for a while, and then I began the method of keeping a book like this, and marking each visit, the amount of cash from day to day, and keeping the ledger well posted—just using two books. On one occasion when I sued for a bill my lawyer put me to shame a little bit by saying that doctors had an abominable way of keeping books, because I brought so many different kinds of day books into Court. However, this day book and ledger method seems to be most satisfactory. The ledger was not allowed to be introduced in evidence, but the day book was. The suit was to recover a bill against a wife's estate, for services rendered to wife and husband. The will said that all indebtedness for physicians' services should be paid, both for herself, and her husband, and the bill was allowed for the entire time, showing, as was brought out by Dr. Harsha, that the wife is responsible for the debts of the husband, as well as for herself. Now I have another bill of a similar kind to collect, and I am sure the wife will refuse to pay it, as she did not care for her husband, but my lawyer told me the other day that the bill is collectible.

I should like to urge upon physicians that we do not need to think that the good we can do, and the honor we can get out of the profession are the only things we should keep in mind. We have our bread and butter to make the same as other men in other walks of life, and I think we should make it a business as well as a professional matter. We should be business men. Those men who have business methods are those who succeed best in the profession, and seem to stand the highest.

The associations which profess to protect physicians against malpractice suits are working physicians in this State for all they are worth, but I have not learned of anyone who has had an opportunity to test the practical working of these organizations. If anyone here has had any experience with them I should like to hear from him.

The discussion of the paper was brought to a close by Dr. Jones, who said:

Mr. Chairman: I haven't much to say in addition to what I have already stated. In apology to Dr. Egan for my statement in regard to the federation, I wish to state that my

authority was the medical journal which I obtained last week, and in which paper it was stated that this Board had established reciprocal relations by which their licenses should be recognized.

I neglected to mention, but I was aware of the fact that husband and wife are jointly liable for medicines furnished either, or to the family.

In reference to the last point made, in reference to the effect of a judgment stopping a malpractice suit, since I finished my paper, I conferred with some of the leading lawyers in our city—and by the way, just here, in confirmation of what Dr. Harsha says about the infrequency of malpractice suits in this state, you will find if you ask the average lawyer any question bearing upon this subject as related to the doctor, that he will tell you that he will have to look it up. They are not quite sure about any point without reference to their authorities. Mr. Jones looked up a case I gave him and wrote hastily on the bottom of the note, "By analogy, I think the New York principle would be held in Illinois. A very hasty examination shows me no case precisely in point." Then he refers me to a case cited in the Report of the Illinois Court of Appeals, *Vigent vs. Scully*, Thirty-fifth Illinois Appellate Court, Page 44. That was an action for damages alleged to have arisen from negligent work in failing properly to supervise the construction of a certain building. It seems to me that if it is true with an architect, it is equally true with a physician—that the recovery of his fee bars any action against him for damages due to unskillful service. I am not advised as to whether any peaceable settlement has the same effect, but I should imagine that it does not unless it has been confirmed by the decision of the Court.

ON THE TOXICITY OF METHYL ALCOHOL IN EXTRACTS AND MEDICINE.*

BY R. H. MAIN, M. D., BARRY.

On Feb. 18, 1903, I was asked to call and see James H. Riffle who had just "gone blind." I had known him personally for eight years. His family history was good—his health was excellent. He was a watch-tinker by profession, aged 44. He was an inebriate and gave me the following history: For several days, being unable to get whisky, he had been drinking lemon extract. On the 17th his sight began to fail and he tained some peripheral vision and at noon stopped drinking. On the morning of the 18th the central vision was gone but he re-

the 18th he was blind. I was called at 6 P. M.

The clinical picture was characteristic. The mental faculties were but slightly impaired—the pupils were widely dilated and he could not distinguish light at all. A lamp held six inches from his face did not change the pupil and could not be seen. He was totally blind and said everything was black. There was frontal headache, nausea, rapid pulse, labored breathing and great restlessness. He was cyanosed and seared. An ophthalmoscope was not at hand at the time and the retina was not examined. His condition grew rapidly worse,—his suffering became agonizing and he died at midnight after a short coma, apparently of respiratory paralysis. It was a classical picture of methyl alcohol poisoning. My friend, Dr. Beavers, was present when he died.

I at once secured a number of samples of the brand of lemon extract he had been drinking, ("Good Hope," Quiney Grocery Co.) distilled it and examined it according to the test of Mr. W. Young (U. S. Dispensatory) and found it to contain methyl alcohol.

A coroner's jury found that "death was caused by drinking lemon extract."

With the assistance of my friend, Mr. E. W. Baker, I made a series of investigations of various culinary extracts and I was surprised to find that many of them were made from methyl alcohol although professed to be made in accordance with the pure food law of Illinois. I called the attention of the pure food commission to the matter and sent samples of the particular extract ("Good Hope") to Dr. E. N. Eaton, State Analyst, at Chicago and after considerable delay and several requests he reported that the extract was made from methyl alcohol—stating, however, that "our food law has no specific statute on lemon extract—A ruling of the commission requires 5 per cent oil of lemon * * If our law made the pharmacopoeia method of preparation the standard we would not need to bother ourselves about the toxicity of methyl alcohol as the pharmacopoeia stipulates cologne spirits—intimating that here their duties ended.

*Read before the Pike County Medical Society at Pittsfield, Ill., April 23, 1903.

There is a widespread belief among the people here that lemon extract is poisonous. This impression is due to a number of deaths resulting from its overuse. Cases similar to the one I have reported have occurred at intervals in the last five years. Dr. H. T. Duffield, Pittsfield, Ill., wrote me of a man who drank lemon extract and was found dead. Dr. E. W. Miller, Columbus, Ill., reported to me (personal communication) a case of methyl alcohol poisoning resembling minutely the one I have reported. Dr. J. Smith Thomas of Pleasant Hill reported a case of a man who drank a quantity of lemon extract at night and was found dead in bed in the morning. I have received reports, also, of deaths from drinking lemon extract at Beverly and at Baylis, Ill., and in both cases the clinical picture was that of methyl alcohol poisoning.

The use of methyl alcohol in food and medicine is evidently of recent development from the fact that prior to 1897 few cases of its poisoning are reported. So far as I know the first case is reported by Mengin, in 1877, of a convict who drank wood alcohol and went blind. This case is mentioned in recent monographs of Dr. DeSchweinitz and Casey A. Wood. Since 1897, however, numerous and more numerous cases are reported until the frequency is becoming alarming. Its use in culinary extracts and beverages such as Ess. peppermint, Ess. Jamaica ginger, ext. lemon, etc., seems to have emanated from Baltimore for it was in the "dry towns" of that vicinity that the first cases of blindness and death were reported from drinking Jamaica ginger, etc.

This fact, that most cases of poisoning by methyl alcohol occur in "dry towns" or in places where other liquor cannot be easily secured, will also account for the want of clinical observation in medical centers. This may also in a measure account for the "difference of opinion" which our pure food commission says exists among "medical authorities" concerning its toxicity. In reply to some letters of inquiry concerning the toxicity of methyl alcohol I have received a number of letters like the following:

1. W. Simon, Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore, Md. "I am not in a position to give you any information, from personal experience, on the toxicity of methyl alcohol."

2. Justin Steer, Washington University, St. Louis. "I am sorry to say that I can give you no information, from personal observation, concerning the toxicity of methyl alcohol."

3. Frank Billings, Dean, Rush Medical College, Chicago. "I can give you no information, from personal observation, of the toxicity of methyl alcohol."

4. Frank M. Fuller, Professor of Chemistry and Toxicology, Keokuk Medical College. "I am sorry that I am unable to give you any information from personal observation, concerning the toxicity of methyl alcohol;" but Dr. Fuller adds a clinical picture of its toxic effects.

5. Prof. John H. Long, Northwestern University, Chicago. "I have had no personal experience with methyl alcohol but it is generally regarded as decidedly poisonous; this seems to be true of the purified product as well as the crude."

This derth of clinical observation in medical centres is significant.

The decided toxicity of methyl alcohol is very generally conceded by the medical profession everywhere except by those "experts" who are hired by manufacturers to prove its harmlessness. The primary effect of the ingestion of methyl alcohol is that of the grain alcohol i. e. it will produce drunkenness in proportion to the amount taken. This is from the testimony of a number of persons who drank a quantity. Then if it is not more poisonous than ethyl alcohol but is only an intoxicant in the same measure why should it escape a federal tax? The assumption that it is not more poisonous than the ethyl alcohol, however, is not true as I intend to show although some persons seem more susceptible to its effects than others.

1. The first report of methyl "extract" poisoning that came to my notice was reported by Dr. A. G. Thompson, of Philadelphia, before the Philadelphia County

Medical Society and published in "The Medical & Surgical Reporter (Philad.) July 24, 1897, entitled "A Case of Complete Blindness due to acute poisoning from overuse of Jamaica ginger" in which Dr. Thompson did not seem to know what element in the Jamaica ginger could have produced the blindness and was at a loss to account for it but later this same case was reported by Dr. Thompson in *Ophthalmic Record* (Chicago) Nov. 1897, and the blindness was shown to be due to methyl alcohol.

2. "A case of blindness by ingestion of wood alcohol" in which blindness was permanent is reported in *Ophthalmic Record*, (Chicago) by Dr. H. Gifford, September, 1899. (*Jour. A. M. A.*)

3. In *Journal A. M. A.*, December 30, 1899, page 1653, is a report by Dr. Casey A. Wood, before the Chicago Ophthalmic and Otological Society of two cases of methyl alcohol amaurosis from inhalation while working in a beer vat with shellac dissolved in wood alcohol.

4. Abstract in *Journal A. M. A.* from *Ophthalmic Record* December, 1899, of reports by Raub of:

a. "Blindness from methyl alcohol." A man on the night of October 4, 1898 drank two to five teaspoonfuls of wood alcohol and on the following morning his vision was impaired, it improved for a time under treatment, then gradually faded away and was lost.

b. Also a case in which three men in U. S. Navy, who on July 4, 1898, drank a mixture of methyl alcohol and benzine, were received on the hospital ship July 5th. One was unconscious and died in a few hours. Another suffered from gastro-enteritis only while the third was semi-conscious, pupils widely dilated and remained so. On the 8th he partially regained consciousness but was totally blind. He regained a part of his vision for a time but it was subsequently permanently lost.

5. In *Journal A. M. A.*, January 5, 1901, page 34, appeared an article by Dr. Edward Stiner of Pittsburg reporting a case of "Amblyopia following the intoxicating use of Jamaica ginger" in which the writer does

not seem to be aware of the probable presence of methyl alcohol in the Jamaica ginger but in an editorial on this same case and others in *Journal A. M. A.*, February 23, 1901, on "Jamaica ginger drinkers amblyopia" the cause is shown to be methyl alcohol.

6. In *Ophthalmic Record*, February, 1901, *Journal A. M. A.*, Dr. Herbert Harlan reports cases of "blindness and death from drinking Jamaica ginger, ess. peppermint, etc."

7. In *Virginia Medical Semi-Monthly*, January 25, 1901, *Journal A. M. A.*, Dr. John Dunn reports two cases of amblyopia following the use of Jamaica ginger.

8. *American Medicine* December 21, 1901, page 995, expert testimony by Dr. H. V. Wurdemann of Milwaukee showing blindness from inhalation and ingestion by mouth of methyl alcohol. After reporting a number of cases he concludes by saying "from the foregoing it seems that it (wood alcohol) will produce blindness of a characteristic type which is sudden and in most cases complete."

9. In the *Therapeutic Gazette*, Detroit, December 15, 1901, (*Journal A. M. A.*), Dr. Swan M. Burnett reports several cases of methyl alcohol poisoning and classes it as a "dangerous poison" and suggests that its use should be prevented. He says in part that "the country is flooded with a poison dangerous to vision and life itself under various and unsuspected forms in the use of wood alcohol."

10. In a paper entitled "Blindness from drinking bay rum, etc." read by Dr. H. Moulton, of Ft. Smith, Ark., before the 52d Meeting of the American Medical Association, (*Journal A. M. A.*, November 30, 1901, page 1447,) Dr. Moulton says in part "those who record cases of blindness due to this cause mention in all thirty persons who drank from one to two drams to an ounce or more of the substance and were made sick by it. Fifteen or fifty per cent lost their sight. An analysis of fifteen cases of wood alcohol blindness and an analysis of twelve cases of blindness due to Jamaica ginger, etc., shows the striking identity of important symptoms." He then gives the classical clinical picture of methyl alcohol poisoning and

gives numerous references which may be found in *Journal A. M. A.*, vol. XXXVII, pages 1448, 1449. In the discussion Dr. Hiram Woods of Baltimore said: "there can be no question in regard to the identity of symptoms in the Jamaica ginger, bay rum and methyl alcohol cases. I am not familiar with any form of blindness which gives the clinical features that all these cases show." The identity of the symptoms was concurred in by Drs. A. B. Hale and Casey A. Wood of Chicago, Dr. Edward Jackson of Denver and Dr. R. W. Miller of Los Angeles.

11. A reprint, sent to me by Dr. Reid Hunt of Baltimore, from the *Johns Hopkins Hospital Bulletin*, (August and September, 1902,) gives the results of a series of twenty-eight experiments made by him with methyl alcohol or Columbian Spirits, and with ethyl alcohol. From his experiments he deduces the following:

"The symptoms of intoxication by wood alcohol are produced more slowly than by grain alcohol and the period of intoxication is more prolonged. The effects of a single dose of methyl alcohol are long continued and it is an especially dangerous substance to give for any length of time. While ethyl alcohol could be given to animals in doses sufficient to cause intoxication for months or even for almost a year without causing marked anatomical or functional disturbances, methyl alcohol given in small doses every other day was tolerated for but a few weeks. The animals remained comatose for days, did not eat and died although the administration was discontinued."

"The highly important discovery has been made that methyl alcohol differs markedly from ethyl alcohol in that it is but partially oxidized in the body and that its administration leads to the formation within the body of a markedly poisonous acid (formic acid). After its administration to an animal or a man a considerable amount of formic acid can always be found in the urine. Formic acid is excreted very slowly. This is probably the cause of blindness which so frequently follows methyl alcohol poisoning in man. Highly differentiated nerve structures

are especially likely to suffer when exposed to the action of a poison for a long time."

Dr. Hunt's conclusions are that "however pure the preparation (methyl alcohol) may be, it is totally unfit as a substitution for grain alcohol in any preparation which is to be taken internally and especially in a preparation which is to be taken for any length of time."

Dr.⁶ Hunt also states that there is no material difference in the action of the purified and of the crude methyl alcohol.

It is interesting to note the difference in the results of experiments of Birch-Hirschfeld with methyl alcohol and those of Dr. de Schweinitz with grain alcohol upon monkeys. (Dr. Hunt's report.) Birch-Hirschfeld describes experiments with methyl alcohol upon three monkeys. Small doses were given every one or two days. When it became evident that the animals were on the point of death they were killed in order that the eyes and optic nerves could be obtained in good condition. The first was in a dying condition on the eighth day; the second on the fifteenth day and the third on the eleventh day. Two monkeys had marked degenerative changes in the retina and one was totally blind.

In Dr. de Schweinitz's experiment he gave a small monkey 3.75 c. cm. of a 95 per cent grain alcohol for six months. At times as much as 7.5 c. cm. of alcohol was given every day for several days. The animal was repeatedly very drunk. No disturbance of vision could be made out. The animal was finally killed. No degenerative or inflammatory changes were found in the eyes or optic nerves.

12. E. G. Hoitt of Marlboro, Mass., reports (*Boston Med. & Surg. Jour.*, Jan. 15, 1903, p. 62) a case where a family of six drank a quantity of wood alcohol. The father, two daughters and grand-son died in a few hours. The mother was ill a long time and died, one son survived by vomiting the substance.

13. S. W. Abbott of Newton, Mass., reports (*Boston Med. & Surg. Jour.*, Jan. 15, 1903), a case where three men drank a quantity of "Colonial Spirits" at Beverly,

Mass., and all of them died soon afterward. He further states that an analysis of this substance showed that it was wood alcohol and said that the same article was being sold under different names, that deaths of this character was on the increase and that "some sort of legislation seems necessary to prevent their occurrence." In the discussion Dr. Abbott states that "it seems to me there is something in the specific nature of wood alcohol that is more poisonous than the degree of poison—something more specific than the degree of poison." Dr. Abbott is probably not aware of the formation of formic acid in the body from the ingestion of methyl alcohol.

14. A. E. Paine (same journal) reports two deaths from drinking wood alcohol at Avon, Mass., and mentioned the fact that the inhalation of its vapor produced cystitis.

B. H. Hartwell, A. W. Buck and Dr. Mead also report (same journal) deaths from drinking wood alcohol and Dr. Buck mentioned the fact that his patient went blind before death.

I have by no means exhausted the literature proving the toxicity of methyl alcohol for our journals frequently report blindness and death explainable and unexplainable which are clearly due to methyl alcohol. Some damage suits are now pending against manufacturers of Jamaica ginger, etc., for alleged poisoning but so far as I am aware none have succeeded in securing damages. In one suit that was brought in February, 1903, the jury stood nine for conviction and three for acquittal.

There can be no doubt that methyl alcohol is used extensively in the manufacture of our culinary and medicinal extracts, spts. ess. etc. I have obtained abundant evidence of this. In addition to the evidence I have given in these reports I have received a number of letters like the following personal communication from Sutliff & Case Co., Pharmacists, Peoria, Ill.:

"We know many instances where spirits, tinctures and other alcoholic preparations are sold for less than the cost of alcohol they were supposed to contain. Some druggists and also manufacturers buy large

quantities of deod. wood alcohol. Representatives of the manufactures of deod. wood alcohol (Columbian Spts. etc.), inform consumers that their alcohol may be used internally and is not poisonous—that the poisonous properties are due to impurities, chiefly acetone."

This last statement is proved to be false by Dr. Hunt and others.

Personal communication from Parke, Davis & Co., Detroit, Mich.:

"An analysis of some of the fluid extracts of competitors in our laboratories disclose the fact that they were made with methyl alcohol. Experiments were made for our private information."

The Bulletin of Pharmacy (Detroit) March, 1903, p. 93, reports the investigations of the health department of New York City. Of 215 samples of spts. camphor secured, forty were made from methyl alcohol. Some of these samples were secured from members of the Pharmaceutical Assn.

Similar reports are found from health boards at Washington and New Orleans—reports of substitution and in the same journal are reported five deaths from substitution, in drug stores, of methyl alcohol for ethyl alcohol. Three of these deaths are reported from Albany, N. Y., and two from Columbus, Ind.

How many unreported deaths occur we may never know, but I frequently see notices of disastrous results in Meyer Bros., Druggist (St. Louis) and Merck's Report.

The reports are so numerous that it is useless to enter into the bibliography. In fact in many cases little effort seems to be made to conceal its use.

A review of this paper will show:

1. That methyl alcohol is an active and dangerous poison;
2. That it is used extensively in extracts, spirits and medicines etc., intended for internal use and that its use is not suspected by the consumer;
3. That it is capable of producing, and has produced in numerous instances, death and permanent blindness even when given in small quantities. (Burnett drachme iss, Raub drachme ii-v.)

If, in the face of the argument presented to us daily, anyone should deny its toxicity we may certainly be justified in considering him beyond the reach of argument.

The use of methyl alcohol has proved lucrative and so long as that is so it will be used extensively. A series of what are called facts are brought to prove its harmlessness but the cases of blindness and death give them the lie.

I will close with these suggestions to our Pure Food Commission:

1. To require every manufacturer of food packages to publish on the package the formula of the contents as is done in England.

2. To prosecute everyone failing to do so.

3. To recommend a federal tax on methyl alcohol so that its substitution for grain alcohol would not be profitable.

Our State Board of Health should require the same from our drug manufacturers.

I desire to express my appreciation of the excellent index of the Journal of the American Medical Assn. It surpasses any medical index with which I am familiar and I would have been unable to secure most of this information without its use.

Discussion.

Dr. Matthews: I would like to ask the doctor if in these bathing mixtures methyl alcohol is advisable? I know father and I prescribe alcohol in bathing mixtures, and the question is, if the substitution is made, is there any danger?

Dr. Main: I would answer that question by saying that I have had no personal experience with wood alcohol as used in the bath for alcohol rubbing, but I saw a report from Los Angeles, Cal., of a nurse who had used wood alcohol for rubbing in the bath after a case of typhoid fever, and the patient went blind.

E. H. Ochsner: This paper seems to be an extremely timely one. If every doctor has had as much trouble as I have I think it should be barred from all use. I have seen a case of total blindness from wood alcohol in my own practice, and one of partial atrophy. In one case the total blindness resulted from the patient burning out large beer casks with wood alcohol. It was his business in the brewery to fumigate large beer vats with wood alcohol, and he became blind. This case I saw two years ago, and I studied the case very thoroughly, and finally concluded that it must be wood alcohol that acted as a poison in his case. I had not seen the report of any case at the time. I immediately sent him to one of our best oculists

in the city, with a note requesting the doctor to ask no questions of the patient, but to examine him and tell me what the cause of the degeneration was. He called me up on the telephone on the following day and told me that nothing but some poison could cause the appearances he found. I took this precaution because I wanted an unprejudiced opinion. I did not want the oculist to get the history, and from that derive his opinion, because I had questioned the patient very carefully. Shortly after that I saw a case of a man who was employed in a varnish factory, but had become totally blind in just exactly the same way. On careful inquiry I discovered that they had been using wood alcohol in their varnish. A third patient came from the same shop, and showed symptoms of chronic poisoning, with a slight change of the optic nerves. I immediately sent him out of the business, and so far as I know he has had no further trouble. I also saw one case where there seemed to be some trouble from the use of wood alcohol in the bath. That was, however, rather indistinct, and would not be of any special value.

I certainly think that the medical profession should take some steps to prevent the use of wood alcohol in any way, whether it is used internally, or in any pursuit where the patient must be exposed for a long time to the fumes of wood alcohol, such as varnish factories, where workmen have to work for many hours in places where they are exposed to the fumes.

Dr. Gehrmann: I think this subject is important enough to warrant this Section going on record in regard to it, and I would therefore propose the following resolution, which I offer for your consideration:

In view of the fact that we recognize the poisonous effect of methyl alcohol, when used internally and externally, be it resolved by Section 3, of the State Medical Society, that the State Food and Drug Commissions be urged to take action to prevent its use in all pharmaceutical and culinary preparations as a substitute for alcohol, and that where it is used in the arts special precaution be taken to protect workmen from its effect.

The resolution was duly seconded. Carried.

RADIO-THERAPY. WITH REPORT OF ELEVEN CASES.*

BY CHAS. D. CENTER, M. D., QUINCY.

The object of this paper at the present time is not to belittle, or try to belittle, radio-therapy, nor to magnify, or try to magnify the same. It is not supposed that the results recorded here will prove anything conclusively in the X-Ray world. Nor do I wish to seem to lay down hard and fast laws to be accepted by any other. The object in view is to add to the list of cases treated by X-Ray

*Read at 53d Annual Meeting, Chicago, May 30, 1903

therapy, to arrive at a better understanding of the subject myself, all the while hoping to be of service to some one else who may be trying to fix bounds, and discover laws governing this new form of treatment. Further, it seems desirable to caution against giving such enthusiastie and rosy reports as some investigators have given.

As yet we have scarcely learned the language of radio-therapy. We talk about the subject, use empirical technical terms in describing it, while even among the initiated there is about as much argument over the correctness or fallacy of expressions in this partially unknown tongue as there is among a lot of enthusiastic golf novices over that branch of human speech.

To afford a basis for judging of the value, or non value, of this report, let me give briefly the means and method of the treatment that has been employed. The static machine has been used for all therapeutic work, the best German tubes procurable, the time of treatment from five to fifteen minutes duration, the distance of the affected part from the tube from two to twenty inches, and screens of lead foil to protect healthy portions. The method followed has been to give the affected part, during the first week, all the X-Ray it could stand without burning. In several of the cases there has developed the red glistening skin, what may be called a primary burn, and one not at all undesirable, but in only one case was there a burn of sufficient degree to cause ulceration. In one case too, there was the bronzed and thickened skin not very unlike a rugous form of lichen. The treatments have been given from six times a week to once in two weeks, the usual method being daily, or every other day until the red glistening skin appears which usually comes in four, five, or six treatments, and after that point is reached every other, or every third day.

The present list of diseases where the rays have been used with varying success includes lupus, epithelioma, carcinoma, sarcoma, psoriasis, eczema, hypertrichosis, sycosis, nevus, lichen planus, pruritus, keratosis, acne, keloid, and probably a few others.

From recent literature I have collected the following numbers of cases treated by radio-therapy. Cancer, of some variety, 144 cases with 45 reported cured. Lupus 27 cases, 12 reported cured. Eczema 10 cases, no cures but some patients relieved or improved. Psoriasis 37 cases, no cures, but nearly all temporarily improved. Sycosis 8 cases, 4 reported cured. Hypertrichosis 8 cases, 4 reported cured. Keloid 3 cases, 3 cures. There has been no strenuous effort made to compile cases, the above being those noted in the few medical journals that have come to my table in the last few months. These reports vary exceedingly; one observer sees nothing but cures; another never gets anything more encouraging than relief or improvement.

The following cases in my own practice are offered for your consideration:

B... male, age 85 years. Epithelioma of neck, involving also the external ear. Disease of five years standing before taking X-Ray treatment. Has had in past two years about 180 treatments. The lesion at one time involved not only the skin but had invaded the cervical fascia sufficiently to prevent sliding motion of cutaneous covering. Twice during the two years I have thought it cured. The first time, the patient went to California, and by my advice placed himself in the hands of Dr. H. B. Stehman for any needed attention. Dr. Stehman considered the case practically cured and sent me congratulations. The present condition is freedom from pain, greatly reduced area of ulceration with none of the oozing so annoying before his treatments began, and a surface lesion of scarcely perceptible depth with a freely movable skin covering. It is fair to say that this case has 90 per cent of improvement, but the 10 per cent necessary to a cure is lacking. One interesting feature in this case is this: the patient is extremely gouty, and whenever an attack of gout comes on, the neck condition grows markedly worse.

Case 2. H..., male, age 67. Carcinoma of rectum. Has had two operations in St. Louis, and is deemed inoperable at time of beginning treatments. 100 sittings. Result, cessation of ichoro-sanious discharge after

the 11th treatment, considerable relief from pain. Patient stopped treatments because of inability to come to office.

Case 3. H. ., male, age 67. Carcinoma of orbit and orbital floor, with involvement of eye. Case referred to me by Dr. F. M. Pendleton after he had enucleated the eye. 20 treatments, and now after a period of four months from last sitting he is still cured.

I wish to say here that where the word eured occurs in the history of these cases it is used in a temporary sense only.

Case 4. N. ., female, age 18. Keloid in scar where an intractable ulcer of the lower lip had been excised. Case referred to me by Dr. R. J. Christie, Jr., 14 treatments. Result, softening of keloid mass, diminution in size, development of normal scar appearance. This case may go in with those eured for the time at least.

Case 5. D. ., female, age 65. Carcinoma of breast. Case referred, after radical operation, by Dr. R. J. Christie. At the time of beginning the X-Ray treatments there was recurrence of the carcinoma along the line of the incision, at each stitch hole, and a new mass had made its appearance below the clavicle. 30 treatments. Result, disappearance of all carcinoma trace along scar of incision and at the stitch holes. Reduction and hardening of the metastatic development below clavicle. Symptoms of steadily increasing auto-intoxication after the 16th treatment. Patient developed general metastasis of abdominal contents, and became too weak to take treatments. While I do not know it positively, I am very sure that this case is not living at the present time.

Case 6. M. ., female, age 66. Carcinoma of breast removed by writer. After a period of six weeks began X-Ray treatments, there being no sign of recurrence at the time. Now after a lapse of about three and one-half months there is no secondary development.

Case 7. C. ., female, age 32. Hypertrichosis. 36 treatments. Depilation was successful, but growth of hair recurred much more luxuriantly than it was originally. Am now shaving her with the electric needle.

Case 8. L. ., male, age 72. Carcinoma of lower lip with involvement of lower jaw,

submental and submaxillary glands, and of the tongue. Patient had been wearing cancer paste plaster for sixteen months. 12 treatments. Result, very rapid increase in size of neoplasm, rapid extension, and acute auto-intoxication.

Case 9. W. ., female, age 22. Adenoma of the right parotid gland. Personal and family history negative. Gland aspirated and a dram of blood obtained. Patient suffered intensely. No stoppage of Stenson's duct. 9 treatments. Positive cure, for present at least. The interval which has elapsed for this case is about two years.

Case 10. I. ., male, age 19. Keloid of foot in scar caused by passage of rifle ball, 8 treatments. Complete disappearance of keloid, with development of normally appearing scar tissue. This patient, like case 4, has a keloid the diameter of a silver dollar at the site of vaccination.

Case 11. R. ., male, age 44. Epithelioma of neck at site of removal of epithelioma with cancer plaster. 12 treatments. Result disappearance of traces of epithelioma.

It may be said here, that with the exception of two of these cases, not enough time has elapsed to say anything of value about the permanency of the results. Case 8 is dead, and case 5 probably so, and they did not die eured. The outcome in these two cases brings out a fact disputed by some operators, i. e. that in well advanced cases of extreme malignancy the use of the rays is not only not beneficial, but is actually detrimental. These cases rapidly developed a condition of auto-intoxication, and at least in case 8. I have no doubt, that the fatal termination was hastened by the treatment. This fact has been brought out previously by Skinner of New Haven, Coley of New York, and Leonard of Philadelphia. Another point I wish to emphasize strongly is to criticize the too enthusiastic conclusions given by some who have made reports. One or two years of observation is not sufficient time to declare that a cancer, or even a benign growth, is cured—to stay cured.

Practically all observers agree that the majority of cases where the X-Ray has been

used are relieved of pain, or of some other uncomfortable symptom. Nearly all of the cases show improvement of objective symptoms, temporarily at least, but it is fallacious and misleading, and undesirable to declare these cases cured because of amelioration of symptoms, or permanently cured because of disappearance of the lesion. Such reports from reputable but over enthusiastic observers is the main factor in throwing columns about radio-therapy into the lay press, and because of this notoriety, into the hands of quacks and fakers. To my mind there is no question as to the intrinsic value of the X-Ray. Just what that value is we are not yet able to say. So eminent a man as Bergmann in his address before the 71st annual meeting of the German Association of Scientists and Physicians proclaimed his belief in the slight therapeutic value of the rays. The other extreme is voiced by Hopkins of Brooklyn, who says "with care we have a safe, and certain cure for a large class of cases hitherto called incurable." It is not surprising that enthusiasm carries some observers off their feet. Even so conservative a publication as *The Journal of the American Medical Association*, in an editorial in April, 1902, alludes to the many disappointments occasioned by the use of electricity in medicine, and then almost immediately, with the hope that springs ever in the human breast, takes up the X-Ray subject in an almost ardent manner.

The conclusions drawn by Towle, and given by him in the *Boston Medical and Surgical Journal* for April, 1901, seem very apropos. He says: that the therapeutic effect of the rays is due to the inflammation excited. (By this he probably means a stimulation healthward caused by the counter irritation due to the rays.) That lupus and several other diseases can be healed over; that in a few reported cases we may fairly assume that a permanent cure has been effected; that in the majority of cases too little time has elapsed to rule out a likelihood of recurrence; that while the permanency of the cure is doubtful in most cases, it is certainly desirable to experiment further.

CLINICAL REPORT OF TWO TUMORS BENEFITED BY THE X-RAY.*

BY W. J. EDDY, M. D., SHELBYVILLE.

An apology would be due this meeting for presenting two such common cases were it not for the fact that the Light treatment is coming prominently before the profession and these seemingly hopeless cases yielded to it in a marvelous manner. There really seems to be something in this method of treatment that may be made a great benefit to suffering humanity and either cure or relieve a class of heretofore incurable cases.

The treatment was undertaken more as an experiment than with the full expectation of a cure. It was the last resort before a radical operation that did not offer a permanent cure and was of itself dangerous and at the best leaving the patient a cripple.

Mr. A. age 24, of German parentage, family history fairly good what could be obtained of it, some scrofula and tubercular troubles remote in the family. An injury to the middle third of the right Tibia, three years previous from the kick of a horse, considerable bruising but no fracture. Six months from date of injury a hard growth appeared on the bone at the point of injury on the crest of the tibia. At first no pain or soreness but it slowly increased despite treatments of all character for its reduction. It was repeatedly punctured by exploring needles but no fluid found in it. I saw it first six months prior to beginning treatment the mass at that time involved fully one-half of the tibia and the leg was nearly double its natural size. It was beginning to pain him considerable at this time and he was losing the use of the leg. I advised amputation above the knee but this he refused and so passed out of my sight. Six months later he called to see me again. The growth at this time involved two-thirds of the tibia and had become very painful at times. My advice then was amputation but this being again refused I asked to try the X-Ray and see what it would do.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

The treatment was begun with a soft tube and was given every other day with the tube about eight inches to begin with and gradually reduced to three inches from the tumor of ten to twenty minutes duration. The first three or four treatments gave no re-action, from the fifth to the eighth treatment there was considerable tenderness and the skin was burned considerably enough so that treatment was discontinued for one week at the end of which time another treatment was given, and the reaction following this treatment was very severe, the tumor showed the effects of the burn markedly, the entire leg became swollen and oedematous, the temperature rose to 103° . The pain required heavy doses of morphine to enable him to bear it together with measures to control temperature and relieve inflammation. This condition lasted one week. Two weeks from time of last treatment the inflammatory symptoms had entirely subsided and the leg assumed the condition prior to the treatment except that the mass had become soft, seemingly containing a fluid. This was evacuated by free incision about one and one half pints of a clear yellow serum. When the fluid was removed it showed a destruction of the anterior half of the tibia fully one-third of its length. The remaining treatment consisted in laying open the wound, chiseling off the ragged edges of bone and packing. The limb slowly healing, leaving it weakened but useful.

Case 2. Mr. M. age 46, American, family history poor, scrofula, tuberculosis, rheumatism and organic heart trouble in the different members of the family, although this man had nothing of the kind, some two or three months before calling on me he noticed a lump in the axilla. As it was not tender he paid but little attention to it until from size it began to bother him in the use of the arm and have sharp pains radiating from it down the arm and into the chest.

When I first saw him it presented a hard immovable mass filling the axillary space but protruding most markedly through the pectoral muscles under the clavicle. There was no inflammatory condition present. I saw

him again in two weeks; the growth had rapidly enlarged, involving all the tissues around the anterior part of the shoulder joint and was giving considerable pain. A radical operation offered but little encouragement as it would necessarily destroy the use of the shoulder if not compel its entire removal. The Light treatment was begun and carried on regularly every second or third day until twelve treatments were given when the burning was such that it was necessary to omit treatment for ten days, during which time the mass which had been stationary from the first three or four treatments seemed to diminish quite rapidly. When he returned for treatment the tissues were shrunk and the tumor much smaller. Treatment was begun again and continued once or twice a week just as could be given without causing too much irritation. At this time three little openings formed in the burned tissue extending into the growth. They discharged a little bloody serum perhaps a half ounce in all; only a few drops would be discharged in a day. The mass has continued to shrink until now the shoulder is down to its natural size and the pectoral muscles are somewhat atrophied, but he has good use of the shoulder. Eighteen treatments were required. There was nothing remarkable in the changes undergone during the treatment of this case. There was a gradual shrinking from almost the beginning and the man is left with a useful arm and is at present doing regular work.

These two cases have been a revelation to me in what the Light may do for a class of troubles that heretofore have been dreaded by the surgeon. In each case we have not only saved the limb but have given it back in almost the same condition as before the tumor started and with very little suffering, excepting in the one case which I think might have been partially prevented had I not pushed the treatment so rapidly. My experience with the X-Ray has taught me that caution is required here more than in almost any line of work but the field of its usefulness I think will prove very wide and

certainly from the reports given by men of prominence all over the country, it is doing a work far beyond what was at first anticipated of it.

RETINAL HEMORRHAGES IN RELATION TO DEGENERATIONS OF THE CIRCULATORY APPARATUS.*

BY THOMAS A. WOODRUFF, M. D., C. M., L. R.
C. P., CHICAGO.

Ophthalmic Surgeon to St. Lukes Hospital and Dispensary and St. Anthony de Padua Hospital.

One who is familiar with the use of the ophthalmoscope, has at his disposal a ready means, in many cases, by observing the changes that have taken place in the retinal circulation of diagnosing certain morbid conditions of the general system.

The background of the eye is the only region of the body where a terminal set of blood vessels can be seen and reflecting as they do many of the degenerations that take place in the general vascular system it is of great importance particularly from the standpoint of the general practitioner that he should have a knowledge, not only of the normal fundus, but of the gross changes that are met with in this region, because, it is often here that the first signs of capillary alterations show themselves. For example, a man or woman apparently in good health that is exhibiting no symptoms of disease apart from a slight defect in vision may be the subject of blood vessel changes of the most serious character. Patients with serious degenerations of this character, not uncommonly consult the ophthalmic surgeon, without even suspecting that they are the subjects of a deadly disease, which may go on for months, or even years, without setting up symptoms referable to other organs and consequently without consulting the family physician. Too little importance has hitherto been attached to fundus examinations as an early indication of vascular changes, although we have known for half a century, that it is in the background of the eye that the most reliable signs of organic disease of the vessels can be detected.

Every progressive internist should practice the use of the ophthalmoscope for the purpose of making use of this important means of diagnosis. Half an hour now and then, spent in some post-graduate school or other college, where instruction can be had, or where time or opportunity do not present themselves in the office of some local ophthalmologist, will after a few months regular practice and instruction enable any observer, to make himself competent to recognize at least, the gross changes that sooner or later show themselves in the course of these diseases. Negative evidence is often quite as valuable as the positive. Where no signs of capillary alterations are to be found in the retinal arteries, the probability is, that there are no advancing changes going on in the vessels elsewhere. It is by no means claimed, that this is an infallible test but, it is among the most important of the early indications of general disease.

Retinal hemorrhages are not infrequently a complication of a number of general diseases the recognition of which, not only aids us in making a diagnosis of the affection, but in a large percentage of the cases enables us to arrive at a pretty conclusive prognosis of the existing disease. Hemorrhages may be of any size, and vary from a minute point to a large extravasation covering the greater portion of the retina. In number there may be only one or many, scattered over the fundus, situated either in the periphery or macular regions alone, or in both situations at the same time, and in most cases following the course of the blood vessels, and in many cases covering them. Their shape depends upon the position they occupy in the substance of the retina, being round, oval or irregular, when situated in the outer or inner layers and striated or flame shaped, when in the nerve fibre layer of the retina. Sometimes the hemorrhage is situated between the retina and vitreous, usually in the neighborhood of the macular region and in appearances has a rounded well defined outline.

Recent bleedings are bright red in color which in some few cases are entirely absorbed but more often the bright red color is replaced by the formation of whitish spots of

*Read at 53d Annual Meeting, Chicago, May 30, 1903

degeneration, which in time usually become pigmented, and in many instances become replaced by masses of dense pigment.

Hemorrhages are situated usually in the neighborhood of the optic nerve head and the region of the macula, although they may be located in any portion of the fundus and arise either from the larger vessels or the capillaries and take place in any of the layers of the retina or between the retina and vitreous. When situated in the nerve fibre layer their appearance is characteristic, being striated or flame shaped, while in other situations they are round and irregular. The extravasations may be the result of either, a diapedesis or rupture of the vessels and due to changes that have occurred in the composition of the blood, to a degeneration in the vessel wall and to disturbances in the circulation.

Retinal hemorrhages although appearing in many forms of diseases of the retina are in the majority of instances merely a manifestation of general disease, the result of a degeneration of the walls of the blood vessels. They are frequently met with in elderly people whose arteries have undergone alteration changes and in patients suffering from chronic diseases of the circulatory apparatus and organic affections of the urinary organs.

The retinal vessels frequently undergo changes similar in character to those affecting the general vascular system, which consists of a thickening of the outer coat of the blood vessel made apparent by the whitish lines seen running along its course and in some cases the vessels or portions of them seem to be replaced by whitish bands. Small aneurismal dilatations of the retinal vessels are sometimes met with and when existing are probably associated with similar conditions in the minute vessels of other portions of the body. They have been found in cases of cerebral hemorrhage, of chronic nephritis, and in disease of the heart. In such conditions hemorrhages are a more or less common occurrence along the course of the vessels and of sufficient importance to render a diagnosis of pathological changes in other portions of the body of value.

The presence of hemorrhages indicates a weakened condition of the vessel wall from a degeneration of retinal vessels accompanied by an increase in the arterial pressure, a condition which is likely to exist in cases of valvular disease of the heart, in morbid conditions of certain organs of the body, as in chronic Bright's disease, in general blood diseases such as gout, pernicious anemia, leucocythemia, etc., or in the degenerative changes seen in old age and which are frequently a forerunner of similar changes existing in the brain with eventual rupture of a vessel in that organ. Retinal hemorrhages nearly always accompany thrombosis and embolism of the retinal veins and arteries, conditions which frequently depend upon disease of the heart, kidneys or blood vessels of the brain, and, although occurring more often in elderly people, they are occasionally met with in persons under middle life and may be the first warning of any existing disease in these organs. Retinal hemorrhages are probably more commonly associated with Bright's disease than with pathological changes in other organs of the body. Although occurring in all forms of organic disease of the kidney, they are met with most frequently in the chronic variety, especially in granular kidney, and in many cases it is not until the patient has been examined by the ophthalmic surgeon on account of some sudden or gradual loss of vision that the existence of the renal disease is known, although the latter has been present for some time. In some cases no albumen is found in the urine or only a trace is found after repeated examinations, the specific gravity is low. The hemorrhages are usually situated in the nerve fibre layer of the retina, and have a striated and flame shaped appearance. When they occur in the other layers they are oval or round and irregular. Both eyes are affected, although the changes may take place in one eye some time before occurring in the other. Degenerative changes in the retina usually appear about the same time as the hemorrhages and consist of yellowish white spots in the neighborhood of the optic disc and macular region, a stellate arrangement of these spots about the macular region

being characteristic of the disease. In leucocythemia retinal hemorrhages are a frequent complication. They are pretty generally distributed over the whole fundus, the larger ones being in the periphery and are usually of a yellowish red or orange color, frequently having a whitish center. When a retinitis is present the fundus is a pale red or orange color, with in some cases, whitish spots deposited especially in the periphery, these probably consist of leucocytes and the blood vessels are dilated and tortuous and of a pale color. The color of the fundus and blood vessels is due to the large increase in the number of the white corpuscles which occurs in this disease, and their tendency to accumulate along the walls of the blood vessels.

Retinal hemorrhages are very prone to occur in pernicious anemia and in appearance resemble very closely a similar condition in leukemia, but differing in the general color of the blood vessels and the fundus which are of a darker hue, although somewhat paler than normal.

Prognosis. The occurrence of hemorrhages from retinal vessels and capillaries in persons past middle life should always be looked upon with the suspicion that there is some degeneration of the general vascular system.

If occurring in old people in whom the existence of an arterio-sclerosis is to be suspected they are probably the forerunner of an attack of cerebral apoplexy which will in all likelihood prove fatal.

In chronic Bright's disease the appearance of retinal hemorrhages points to extensive degeneration in the general circulatory apparatus and will almost invariably be followed by a fatal termination of the case in a few months. The average duration of life after the appearance of retinal complication is about two years.

In progressive pernicious anemia and leucocythemia the presence of retinal hemorrhages renders the prognosis grave and usually points to a fatal outcome of the disease.

103 East Adams St.

MODERN SURGERY OF CONGENITAL CLEFT-PALATE IN INFANCY.*

BY S. R. HOPKINS, M. D., SPRINGFIELD.

The class of cases here referred to includes only those cases wherein the cleft is continuous and the upper jaw is disproportionately wide. It is this class that has not been successfully dealt with until quite recently although Dieffenbach as early as 1834 practiced a somewhat rude and unsuccessful operation, by introducing through the bony palate, heavy lead sutures and forcibly bringing the bones in approximation.

In the Australian Records of 1851, Dr. Ziegler describes an operation, which he performed upon a dead child with a continuous cleft, wherein by the use of a pair of clamps he brought the bones together in the median line.

Somewhat later Garretson of Philadelphia made use of clamps applied to the buccal aspects of the jaws for immediate closure of such clefts. The bones were held in their new position by means of rolls of bandage material placed on and above the malar processes and held in place with a roller bandage. It is quite obvious that this method would rarely lead to success.

Various flap operations have from time to time been performed; but none of these restored the proper relation between the upper and lower maxillae.

It has remained for T. W. Brophy of Chicago, to perfect a method of closing these clefts in early infancy, whereby the abnormally wide upper jaw is narrowed, and success is almost positive.

The operation on the palate should in all cases precede the operation upon the hare-lip. The following is the technique: The infant being chloroformed, his arms secured by a sterile sheet, head and hair enveloped in a towel and mouth, nose and pharynx rendered as nearly aseptic as possible, he is laid in the dorsal position upon a table when the operator standing at his side, raises the cheek and by means of a heavy, slightly curved needle with eye in the point, he passes a heavy

*Read at 53d Annual Meeting, Chicago, May 30, 1903

double silk suture entirely through both maxillary bones beginning at a point on the buccal aspect just above the alveolar and behind the malar process to emerge at a corresponding point on the opposite side. It is difficult to pass a needle thus entirely through both maxillary bones and under such circumstances it is advisable to pass separate sutures, one from each side to emerge at the median line where they are looped together and one double suture drawn entirely through. At a corresponding point just anterior to the malar process another such suture is thus inserted. These two sutures are replaced by moderately heavy unannealed silver wire. Thus we have two heavy silver wires passing entirely through both maxillary bones, above the palate, one in front and one behind the malar process. Two lead plates made of sheet lead of moderate thickness (varying with the extent of ossification of the bones and width of the left) are next cut and molded to fit the buccal aspects of the bones from which project the ends of the silver wires. The plates are perforated to accommodate the wires whose ends pass through the perforations. The two right and the two left ends of the protruding wire are next twisted together over the plates. At this stage before the wires are rendered tense, the margins of the fissure are vivified in such a way as to admit of a broad, osseous median union. By means of the thumb and fingers the two bones are by force brought in contact, the wires in the meantime being twisted in order to prevent the maxillae from springing back into their original positions.

If the cleft cannot be thus obliterated a knife may be inserted in a horizontal direction above the lead plates, when by a to and fro motion of its handle, the bones will be so weakened as to admit of easy obliteration of the fissure. This incision may be made on one or both sides depending upon the amount of comparative rigidity of the two bones. When the freshened edges of the bones are in accurate contact the twisted ends of the wires are turned down against the plates and the operation is completed.

If in case the inter maxillary bone protrudes abnormally it is best restored to its

proper position by the removal of a V shaped piece from the vomer beneath when it is pressed into place and there secured.

The after treatment besides the usual post operative care consists in antiseptic cleanliness of the mouth, the giving only of liquid nourishment and the prevention of disturbance of the part by the hands of the patient or otherwise. The lead plates are left in place until firm osseous union has taken place, and the soft palate is repaired at a subsequent operation.

The advantages of this osseous operation in infancy over other methods in vogue are as follows:

First. The early operation permits the child to better take nourishment and does away with the danger of death from starvation.

Second. By this method only can the upper jaw be brought into proper relation with the lower, and in infancy the bones are soft and yielding and admit of easy adjustment of the misplaced fragments.

Third. With repair of the palate the muscles are brought normally into use thus preventing their atrophy from disuse, the speech is better and the teeth are not so distorted.

Fourth. The statistics show the rate of mortality to be the lowest with this method of operating, compare 211 consecutive operations upon children under 6 months, by Brophy, all successful and without a single death, with 66 operations upon children under 1 year by Julius Wolf of Berlin, with 14 failures and 1 deaths, over 20% of failures and a mortality of 11%.

At the French Surgical congress in 1889 Ehrmann reported 10 operations upon children under 2 years with 6 good results 2 deaths and 2 failures.

The statistics of Lane of London who uses a flap operation in early infancy, are good, but by his method the proper relation between the upper and lower maxillae is not brought about.

With reference to the power of proper enunciation following these early operations, the results are almost always satisfactory. A method of correcting the defective speech in

children, operated upon after having learned to talk and first suggested I believe, by Oehsner about five years ago, by causing the child to learn a foreign language and forget if possible, his mother tongue, has been recommended by Ferguson with promising results.

Brophy thinks it inadvisable to perform his osseous operation later in life than six months and has never done so. The author however, believes that it should be the operation of choice in cases of continuous clefts in children whose upper jaws are abnormally wide, (and who have not had the benefit of the operation prior to 6 months,) as late in life as 18 months.

A few slight modifications are necessary, however, in order to apply the operation to children of this age. It is necessary to use heavier wires and lead plates, than in earlier life and they should (because of the rigidity of the bones toward their posterior portions) be placed nearer the front than in earlier life, and it may be necessary to have recourse to a bone-drill in order to afford passage to the wires, because of the advanced stage of ossification present at this age. It may be impossible or even unnecessary to close the entire osseous cleft; but I am sure that all cases within this age limit, can be closed to an extent to bring about the proper width of the upper as compared with that of the lower jaw.

A brief report of two cases successfully operated upon by the method just suggested, is here appended.

CASE 1. Boy 11 months old, continuous cleft .005 wide at the front and a trifle over .01 at the posterior part of the hard palate, the hare-lip having been repaired by another operator, previously. Two No. 17 wires and extra heavy plates were used, the maxillary bones weakened by an incision above each plate when the cleft was closed for a distance of .015 in front. The superior maxilla, which before the operation was disproportionately wide, was, after the operation, in proper relation with the lower.

The lead plates were left in place for a month, the result was perfect and the soft palate was repaired at a subsequent operation.

CASE 2. Boy 14 months old, continuous cleft and hare lip. Width of cleft in front same as in case 1, the posterior measurement being a little greater. No. 17 wire and heavy plates were used, the weakening incisions made above one plate only and the cleft obliterated for a distance of .015 in front, thus bringing the upper into proper relation with the lower jaw which relation did not exist prior to the operation. The plates were left in for a month, perfect union was the result and the soft palate and hare-lip were repaired later.

RUSH MEDICAL COLLEGE ENDOWMENT FUND.

It is currently reported that the committee appointed to secure the \$1,000,000 condition to the complete absorption of Rush Medical College into the University of Chicago, expects to announce the fulfillment of that condition at the beginning of the Fall Quarter. The daily press did not give the facts when it stated that Mr. Rockefeller would tender \$6,000,000 when the \$1,000,000 condition was met, but when the \$1,000,000 is secured Rush Medical College will become a department of the University of Chicago and thereby shares its general and special disbursements.

A committee representing the Rush Medical College and the University of Chicago went to New York to apprise John D. Rockefeller that Rush has \$1,000,000 ready for improvements and is ready to receive his donation of \$6,000,000.

"There will be no statement given to the public at present," said President William R. Harper of the University of Chicago. Upon the return of this committee the plans for the enlargement of Rush Medical College, or so far as they have been completed, will be made known. A list of the subscribers to the \$1,000,000 fund may also be given out, but this has not yet been definitely decided.

SUMMER COMPLAINT.

The mucous membrane of the gastro-enteric tract rids itself of the inciting material of Summer Complaint with the assistance of very little internal medication, though this act is not performed without making a demand upon the general store-house of energy. Add to this the depression caused by toxæmic absorption and the marked exhaustion of an acute attack is readily explained.

Probably there is no better aid to further beneficial medication than Antiphlogistine applied warm and thick over the entire abdomen. The dressing to be immediately covered with absorbent cotton and a suitable compress. Peristaltic spasm is at once reduced, intestinal comfort promoted and refreshing slumber invited. Acting reflexly, Antiphlogistine restores the muscular tone of the intestinal walls and energizes the entire economy to resist the prostration from summer complaint so common to infant and adult during the humid months.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Calhoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—A. S. Wall, M. D., Champaign.
Christian County—W. T. Bridges, M. D., Stonington.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
De Witt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—Geo. P. Cassidy, M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. N. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. G. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—R. E. Lewis, M. D., Macomb.
McLean County—E. S. Reedy, M. D., Bloomington.
Macon County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackey, M. D., Aledo.
Montgomery County—G. A. Clotfelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.
Pope County—W. S. Dixon, M. D., Rosebud.

Pulaski County—A. W. Farr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. K. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—A. W. Ball, M. D., Rushville.
Scott County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermilion County—E. E. Clark, M. D., Danville.
Wabash County—G. C. Kingsbury, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marion.
Winnebago County—S. R. Catlin, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyler, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopeston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
AuxPlaines Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynecological—R. W. Holmes, M. D.
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Lodor, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side—Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—L. H. Mettler, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tivnen, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.

The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

AUGUST, 1903.

The officers and members of local societies are especially requested to notify the Editor of the Journal at once of any member in good standing who is not receiving his Journal regularly.

An apology is due the members of the Society for not having sooner received the index to last year's volume. For some

technical reasons the index was held in the postoffice until the matter could be considered by the department. It will reach our readers very soon.

OUR NEW CONSTITUTION.

The officers of the State Society as well as the officers of the County Societies are receiving innumerable inquiries regarding

the new constitution and by-laws adopted at the last meeting. This constitution, as you know, is with very slight modification, that formulated by the Committee of the American Medical Association on organization, and is designed to secure uniformity of organization in the various states. According to Chairman McCormack, of Kentucky, twenty-eight states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, West Virginia, Wisconsin and Wyoming, have already adopted this new constitution, a complete copy of which was published in the June issue of the Journal. We would especially urge that each member of the Society carefully read this new constitution and by-laws. We feel sure that a careful study of its provisions will furnish the answer to most of the questions which are being asked. Copies of the Constitution will be sent by the Secretary upon application.

A COMPONENT SOCIETY.

There seems to be more or less misunderstanding about what constitutes a component part of the State Society under the new constitution. Article 3, says: "Component societies shall consist of those county medical societies which hold charters from this (the State) Society." The members of district societies, and especially those living in counties which are still without county organization are very solicitous about their relation to the State Society. We would urge that they immediately organize every county as the best solution of the difficulties of their situation. However, if they cannot do this, Section 4 of Chapter 8 of the by-laws

provides: "In sparsely settled sections, or for other sufficient reasons, it (the Council) shall have authority to organize the physicians of two or more counties into societies to be suitably designated so as to distinguish them from district societies, and these societies when organized and chartered shall be entitled to all the rights and privileges provided for component societies until such counties shall be organized separately." It is the duty of the Council to organize such societies, but at the same time each Councillor is urged to secure, as nearly as possible, a county organization in each county in his district.

OUR DISTRICT SOCIETIES.

Few members of the State Society knew that a constitution was to be proposed in Chicago and almost no consideration had been given the matter prior to the meeting, at which time there was very limited opportunity for discussion. For this reason the district societies in Illinois failed to receive the consideration which they should have received at the hands of the State Society. It is much easier and wiser to induce county and district societies, already organized, to incorporate certain new principals of organization for the sake of securing uniformity and harmony of action, than it is to force them to adopt certain set formulae of constitution and by-laws. There are a few foundation principals of organization which the American Medical Association should require of each of its component units. When these are fulfilled the details should be left to local conditions, local interests and local preferences. It should be the aim of organization to bring the independent units into a single organized whole in such a way that their duties will be performed and acts accomplished without friction, strain or waste.

Every well organized existing district society should be maintained and preserved as far as practicable. In some cases it may be necessary to extend the territory of a district. It may be necessary to form one or more new districts. There is no reason why the existing old and honorable district societies should not be properly preserved with their accumulated history for usefulness and good work. They were the real pioneers in medical organization in Illinois, and their opinions, and especially their feelings, certainly deserve our utmost respect. Especially is this true when every one of them can be preserved and incorporated into our State organization without in any way hampering or interfering with the plan adopted. Their names should be preserved, for each name carries with it a bit of history which will go to strengthen the whole state organization. Article 7 of the constitution provides "The House of Delegates may provide for * * * * * the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies." And Article 9 provides that "The Presidents of the Councilor District Societies shall be the Vice Presidents" of the State Society. Section 2 of Chapter 7 of the by-laws provides that "The Vice Presidents shall assist the President in the discharge of his duties; preside in his absence or when called on to do so. In the event of the President's death, resignation or removal, the Council shall select one of the Vice Presidents to succeed him."

It is the duty of the House of Delegates under the constitution to organize these district societies. There may have been good and sufficient reasons why this was not undertaken last year; the principal one being the hurried way in which the constitution

was adopted and put into force in order to put Illinois in line with her sister states in the new plan of organization. So far as we have been able to learn it is the feeling of the majority of the members of the Council, as well as many other officers and members of the Society, that the old district societies should receive at the hands of the next House of Delegates the consideration to which their honorable history justly entitles them.

THE QUESTION OF DUES.

The question of dues is another which has created a good deal of discussion in the local societies. Article 10 of our new constitution says "Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$2.00 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the society's publications, and in any other manner provided by the House of Delegates."

It will be thus seen that each member of each component (county) Society is expected to put into the treasury of such local society the amount assessed by the House of Delegates of the State Society. *This year the amount is \$1.50 for each member.* Section 12 of Chapter 10 of the by-laws provides that "The Secretary of each county (component) society should forward this amount, (\$1.50 for each of its members) together with its roster of officers and members, list of delegates and list of non-affiliated physicians of the county, to the Secretary of this Society between the first and tenth of April of each year." Section 13 of the same chapter reads "Any county society which fails to pay its assessment or make the report required, on or before April 15,

shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met." Section 4 of Chapter 7 in defining the duties of the Secretary of the State Society says "He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies; charging against each society its assessment, collect the same, and at once turn it over to the Treasurer."

Up to the time of the meeting last April in Chicago the regular dues of the State Society were \$3.00, and many members forwarded to Treasurer Brown this amount. Some societies had been informed that the dues at that meeting would probably be made \$2.00, instead of \$3.00, for those societies which paid their assessment as a society. Consequently a number of societies sent to the Treasurer \$2.00 for each member instead of \$3.00.

At the Chicago meeting the assessment per capita was made \$1.50 per member. This state of affairs has led to considerable confusion in the minds of members as to the amount of dues and has given the Treasurer, Dr. Brown, of Decatur, a great deal of extra work in remitting to the members the amount which they had paid in the excess of the assessment. We wish to make it plain that it is the duty of each member of a component (county or in unorganized counties the district society) to pay to the Treasurer of such component society \$1.50 in addition to the regular local society dues, and it is the duty of each local society treasurer to forward to the Secretary of the State Society \$1.50 for each member of such local component society. It is the intention, however, of the Council in supervising

these collections to use the utmost leniency toward members. Every physician should be given ample time to understand fully the new arrangement before assuming that he does not intend to pay his assessment.

The following resolution, adopted at the last meeting of the Council, will explain its position in the matter of new members of local societies:

"Resolved, That the new members joining societies during the year and paying their dues to the State Society in advance shall be credited for such dues for the fiscal year beginning May 1st, 1904, practically obtaining membership for two years for one year's dues, (but this shall in no way effect the dues of such members in other county societies) and receive the Journal of the State Society from time of membership."

It must be borne in mind that when county societies apply for, and receive a charter from the State Society they become component parts of the State Society to be governed by the constitution and by-laws of that society in so far as pertains to their relations to the State Society. The affairs of the county society are governed by the constitution and by-laws of such county society.

VALUE OF MEDICAL ORGANIZATION

The question is frequently asked by those who have recently joined medical organizations, or are thinking of coming into medical societies, "What is the value of medical society membership?" The full answer to this question would fill a volume, for we believe the advantages of medical society membership are innumerable.

Of course the one great object of medical organization is the better education of the members of the profession, and by this means the better treatment and care of the sick. By coming together in society meetings we exchange ideas and experiences.

Medical Societies make better doctors and the members give their patients better treatment, than is given by those who travel their professional career alone and are never jolted out of their ruts of ignorance, prejudice and selfishness by contact with their brother practitioners.

This is one of the reasons for organization, but the following description of the "Power of Organization" in Kentucky, gives us a glimpse of a few other reasons why one should aid in the upbuilding of strong, healthy and vigorous medical organizations:

"In Kentucky every medical office in the State is filled through the medium of the State and county medical societies. No appointment to a State, county or municipal board of health, vaccinator, insurance examiner, etc., is made without consultation with and reference to the organized medical societies, and no man can receive such an appointment unless he is enrolled in the county society of the county in which he lives. Improper or unjust legislation can no longer even be introduced, for the tremendous strength of organized effort would at once strangle it. It is said, on the highest authority, that there is not a single advertising quack nor illegal practitioner in the State—a result due wholly to the complete organization of the profession and the persistent and insistent demands of the organization. A physician legally licensed to practice medicine in the State of Kentucky can have no recognized professional standing unless he be a member of his county and ipso facto his State Society."

We fully believe that matters medical should be controlled by the medical profession, and we can see no reason why government in matters medical, by great medical organizations which are always working for the amelioration of the suffering, the prevention of disease, the better education of

its members and the prevention of quackery and fraud, does not give the people far better assurance of good results than government, in such matters, by purely political organizations, which have little knowledge and less interest in such problems. It is simply a question whether the policy of our Boards of Health, State Institutions, etc., is to be dictated by the Republican or Democratic (organized for purely political purposes) state organization, or whether the medical men will so strengthen this organization that their demands will meet that respect and hearing to which they are justly entitled. What is being done in Alabama, Kentucky, and other states, can be done in Illinois.

OUR CURRENT LITERATURE.

We believe that if medical men who write papers for medical society meetings and medical publications would give more attention to the methods of securing information about the subjects of which they write it would be greatly to the advantage of the profession as a whole, and to the writer in particular. In fact many well intended papers would remain unwritten.

Two items appearing almost simultaneously in the medical journals, and receiving wide notice, led us to make some observations on this subject. The *Index Medicus* has been published intermittently for many years. The fact that it has two or three times been revived shows that there is a real demand in the profession for such a publication.

Recently the Carnegie Institute has appropriated ten thousand dollars (\$10,000.00) annually for three years for the purpose of putting the *Index Medicus* on its feet, and we understand that it is the intention of this institution to continue the publication of the *Index* if sufficient interest is shown by the profession in the publication. It is stated

that less than 300 subscriptions have been received by the publishers.

It certainly seems to us that no man who writes papers or medical journal articles can afford to be without this Index. It is our best source of ready reference. Every physician who is engaged in medical writing or research, and every library which serves the public, should contain a copy of this Index. The subscription price is so low, being only five dollars (\$5.00) a year, that no man can afford to be without this means of access to medical literature.

The second item to which we referred was the meeting of the National Association of Medical Librarians, of which Dr. Wm. Osler, of Baltimore, is President; Dr. Abraham Jacobi, of New York City, is Vice President and Mr. Albert T. Huntington, of Brooklyn, is Secretary. This Association is new and we think few physicians are familiar with its existence or aims.

We believe that its field of usefulness should be greatly extended, and that it is the proper organization to lend its influence to the promotion of the publication of the Index Medicus. Such representative names as those of the officers of this Association carry great weight with the members of the profession for any enterprise which they would foster.

The field of usefulness for such an association is great and ever extending. Many medical societies now own libraries and every public library, of which there are thousands scattered over the United States, should add a little each year for the assistance of the medical profession in their respective communities. If this library association could extend its representation much good could be accomplished in educating physicians in the use of better methods of study and the means of gaining access to the enormous fund of literature which is really close at hand.

OBITUARY.

DR. HIRAM K. JONES.

His years were years of usefulness—famous as student of philosophy—a friend of Literature—Physician and Philanthropist.

Dr. Hiram K. Jones passed from earth June, 1903, at his late residence, Jacksonville, Ill, after an illness of a month's duration. Death resulted from general debility incident to his advanced years.

In his death the community has lost a ripe scholar, a philanthropist, a physician of high standing in his profession and a man whose generosity of spirit has made him much beloved. An unfailing friend of higher education he has been loyal to its best interests and the Jones Memorial Building at Illinois College in Jacksonville will ever stand as a monument to his liberality and to his noble wife, in whose memory it was erected.

Dr. Jones has been identified actively with the interests of Jacksonville over 50 years and during that time he has become known far and wide for his rare intellectual attainments and far-sighted vision. He was ever beckoned onward and upward by the higher things of life and his desire to learn the knowable things of this life and to have a clarified and definite understanding of the things beyond was ever his constant aim and purpose. He was a true scholar in the highest sense of the term and probed deeply into the philosophy of Socrates, Aristotle and Plato until he was spoken of by the great Emerson as the most profound Platonist in America.

He was associated with Ralph Waldo Emerson, Bronson Alcott, Henry Thoreau and Dr. W. T. Harris, now commissioner of education, in the founding of the Concord School of Philosophy in 1879, whose ten years of existence has become historic and his papers read before that body were highly praised.

Emerson, Harris and Alcott have been entertained at his home and during his lecturing tours Emerson always made it a point to visit Dr. Jones when in the vicinity of Jacksonville.

Mind study may be said to have been a hobby with Dr. Jones and his constant endeavor was to thoroughly comprehend the psychic, spiritual and physical natures of man. His researches along these lines may be said to be truly remarkable and his lectures on philosophy are filled with deep truths and concrete demonstrations.

Hiram K. Jones was born in Culpepper, Culpepper County, Va., August 5, 1818, and was the son of Stephen and Mildred Jones. His grandfather on the paternal side crossed the Atlantic in time to do good service in the revolutionary army under the direct command of Washington and was ever known as a loyal patriot. His father emigrated from Virginia in 1827 to Lincoln County, Mo., settling at Troy, where the early life of Dr. Jones was spent, and where he remained on his father's farm until 16 years of age.

In the meantime he improved his opportunities for education as best he could and after leaving school taught for 8 years in the academies and other schools of Lincoln county.

He came to Jacksonville in 1840 and entered Illinois College, graduating from the classical course with honor in 1844 and from the medical course in the college two years later, receiving the degree of M. D., and in 1847 was given the degree of M. A. The medical department of Illinois College was the first medical school in Illinois.

After graduating he went to Missouri, where he practiced his profession, but in 1853 returned to this city and in 1854 succeeded temporarily Dr. Higgins as acting superintendent of the Central Hospital of the Insane. He served until Dr. Andrew McFarland was appointed superintendent. He opened an office for the practice of his profession in Jacksonville in 1855 and ever since until recent years, gave to his patients that conscientious devotion and study characteristic of the true physician. During this period however, he found time for the pursuit of his literary and philosophical tastes.

He was a charter member of the Literary Union of Jacksonville, organized April 14, 1864, and only a few months ago the Union was entertained at his home and listened to a paper on economics delivered by Hon. W. J. Bryan, a cousin of the deceased. The reputation the society enjoys today is due to such of its founders as Dr. Jones, whose progressiveness, wisdom and sound judgment have made it what it is.

For many years Dr. Jones was elected president of the Illinois College alumni association and since 1866 has been a member of the faculty of the institution as professor of philosophy, and during each college year until 1898, delivered a course of lectures to the senior class that were learned and profound. For ten years he served on the board of trustees.

He never seemed to forget what his education had done for him and as a lover of the true and good in all things, and especially in education, his heart warmed with sympathy for both students and faculty. Those who have enjoyed the rare privilege of his instruction learned to love him and respect him.

Honored alike in life and death his name will ever be unseparably linked with the history of Illinois College as student, teacher and benefactor.

The deceased was a Republican in politics and at one time made a vigorous canvass as a candidate for the State Legislature. He was a strong supporter of the abolition cause and upheld the hands of Abraham Lincoln during the great national crisis by his unflinching patriotism.

During the year 1878 he was president of the American Akademie and was for many years a valuable contributor to the columns of the magazine of that name.

He was married in 1844, to Miss Elizabeth Orr, daughter of Judge Philip and Lucy Orr, of Pike County, Mo. They lived happily together until her death in 1891.

They were both members of the Congregational church.

At the last meeting of the Morgan County Medical Society the following resolutions were unanimously adopted, as follows:

The Morgan County Medical Society is called upon to pay its last respect and to declare in testimonial form to the life work and character of its Senior member, Dr. Hiram K. Jones, who departed this life June 16, 1903.

Dr. Jones possessed the rare mental endowment of the painstaking research worker coupled with that of the philosophic reasoner. These qualities of mind associated with equally great qualities of heart gave him a magnificent equipment for the practice of the art and science of medicine.

As evidence that he was ready and willing to work for others we have but to review his long useful life in this community, his devotion to the ideals of the profession, and his own interpretation of what is duty.

His professional life was distinguished by his spirit of service which dominated his life's work and especially marked during the trying times of the civil war, when he gave his services free to the families of the soldiers fighting in the cause of their country. His career in this community has been characterized by services outside of the professional field, services as a citizen, philanthropist, scholar, teacher which have endeared him to his home city, to the club life of this city, and its educational institutions.

This Society will cherish the memory of Hiram K. Jones because of his clean, devoted, scholarly, manly and blameless record as a physician. It would urge upon all physicians to follow his example and make intrinsic worth of character with painstaking adherence to the professional ideals, as the true foundation for success in the practice of medicine. Therefore,

Resolved: That this record of some of his noble attributes of character and sterling professional work be inscribed upon the records of this Society, and a copy be transmitted to his relatives.

T. J. Pitner,
C. E. Black,
F. P. Norbury.

DR. DE LASKIE MILLER.

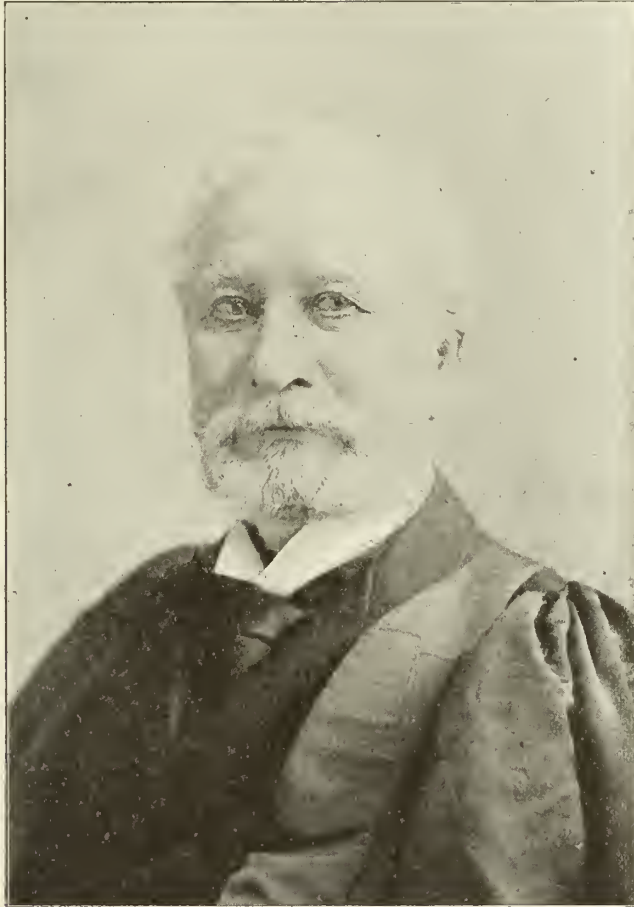
Dr. De Laskie Miller, one of Chicago's pioneer physician, a man very prominent in his profession, died at 7:15 a. m., July 9, 1903, in the presence of his daughter, Mrs. Chas. C. Curtiss, of Chicago and his son, Mr. Louis A. Miller, of Atchison, Kan., at his home 110 Astor st. He was born in 1818 in the State of New York. Was married to Miss Adeline O'Harrow of Albion, N. Y., in 1846, by whom he had five children, three of whom died in infancy. He was in his usual good health until the 3d of July, when he was overcome by the extreme heat. The following day he seemed to be doing well but on the 5th of July had a hemorrhage into the brain, of a slight degree, producing a paralysis from which he partially recovered, but on the 7th a recurrence of the hemorrhage was

followed by an unconscious condition from which he did not rally.

Dr. Miller graduated from Syracuse Medical College in 1842, began the practice of medicine in Lockport, New York, subsequently practiced in Flint, Mich. He came to Chicago in 1852. He was made Professor of Obstetrics and Diseases of Women and Children in Rush Medical College in 1859, which chair he held until 1879. He was made professor of Obstetrics and Diseases of Children and continued in active service in this honorable position until 1889.

standards of the college which followed immediately thereon. Last winter feeling that he was hardly able to attend to the duties devolving on the President of the Board of Trustees, he resigned the position, but his colleagues would not accept the resignation, although the Vice-President assumed the duties of the position.

Those who have known Dr. Miller intimately for more than a quarter of a century testify to his attributes and scientific attainments. In the sick room he was full of hope and warmest sympathy. His presence under such circum-



DR. DE LASKIE MILLER.

He was always exceedingly popular with the students. His lectures, while scientific to the highest degree, were entertaining and given in the most classical English. Dr. Miller was a scholar in the full sense of the word. At the affiliation of Rush Medical College with the University of Chicago, he became President of the Board of Trustees of the College and Emeritus Professor of Obstetrics and Diseases of Children, taking an active and important part in the great amount of work necessary to bring about this affiliation and in the elevation of the

stances was a ray of bright sunshine, always beneficial to those with whom he was associated. He was especially helpful to the younger men of the profession and very many of those who have obtained success in Chicago, owe some of it at least, to his wholesome advice and his generous assistance. While for the past few years he has withdrawn from the active practice of his profession, yet he always was glad to extend his helping hand to those in need, and from his great storehouse of wisdom, gave in abundance. He gave up practice

some years ago, but maintained his interest in Medicine and was a regular reader of the current medical literature until the close of life. Dr. Miller was a communicant of the Episcopal Church and for a number of years an active member of Trinity parish of this city. He was also a Knight Templar of the York Rite of Masons and a 33d degree of the Scottish Rite. His funeral occurred from his late residence Sunday afternoon at 3 o'clock, July 12, 1903. Burial was made at Graceland cemetery.

The following persons represented the organizations of which Dr. Miller was a member:

For the Trustees of Rush Medical College, Judge Smith.

For the Chicago Medical Society, Drs. J. Stowell, F. X. Walls, M. L. Harris, John Bartlett, J. E. Owens, P. Adolphus, H. P. Newman, H. P. Merriman, D. T. Nelson.

Honorary Pall Bearers: Judge Horton, Judge H. O. Freeman, Rev. T. W. Goodspeed, Drs. D. W. Graham, D. R. Brower, E. F. Ingals, J. M. Dodson, J. N. Hyde, H. B. Favill, A. D. Bevan.

Active Pall Bearers: C. D. Wescott, J. H. Salisbury, J. C. Gill, M. R. McEwan, C. Parker, R. W. Holmes.

DR. ISAAC N. LORE.

Isaac N. Lore, M. D., born in Barry, Ill., September 13, 1848, and was consequently nearly 55 years of age at the time of his death, June 18th, 1903.

At the age of 13 he went to St. Louis to live with his uncle, Dr. J. T. Hodgen, the famous surgeon. He entered the St. Louis Medical College, and was graduated in 1872. He served as an intern in the St. Louis City Hospital for two years, and then became assistant to Dr. Hodgen. He devoted his attention chiefly to diseases of children, and built up a large practice. For a time he was city physician of St. Louis, and was also instructor in physiology in the College from which he graduated.

In 1887 he was elected president of the Mississippi Valley Medical Association, and in the same year was made secretary of the Pediatric Section of the Ninth International Medical Congress.

In 1889 he was appointed professor of pediatrics in the St. Louis College of Physicians and Surgeons. He was elected a trustee of the American Medical Association in 1889, and was three times re-elected, serving continuously as a trustee until 1901. In 1893 he was elected vice-president of the American Medical Association.

In 1889 he presided over the Section of Diseases of Children. He founded the Medical Mirror in 1890, which he conducted up to the time of his death.

He was professor of diseases of children in the Marion-Sims College of Medicine of St. Louis, preceding his removal to New York.

Three years ago he left St. Louis and located in New York city.

On May 29 he went abroad with a patient who had been operated upon by Dr. W. T. Bull, and after seeing her comfortably located in Paris, he returned, sailing on the Auramia.

He was chosen by the passengers to present to the captain and officers of the steamer, resolutions of commendation and thanks, and on June 18, while the steamer was in New York harbor, and nearing her pier, he had risen to perform this pleasant task, had read the resolutions and was delivering the presentation speech when he suddenly fell to the deck. He died in his cabin a few minutes later. The cause of his death was probably cerebral hemorrhage.

He leaves a widow and two children.

The funeral services were held June 22d, at St. Paul's Methodist Episcopal church, New York. The body will eventually be interred in St. Louis.

DR. DAVID ELLIS.

When Dr. David Ellis met his tragic end at Augusta by being struck by a passenger train July 5th, 1903, there was suddenly removed one of Hancock county's oldest citizens and a man whose name is impressed upon the records of Illinois, a man of unquestioned integrity, unblemished character and unbending adherence to the principles in which he believed. He was a Democrat high in the councils of his party during his prime.

Dr. Ellis was 77 years of age. He was born in Bourbon county, Ky., February 4, 1826. He was married at Ghent, Ky., on January 30, 1855, to Miss Eliza Tomkins Fisher, with whom he lived forty-eight years. Eight children were born to them, four of whom survive—Doctor James P. Ellis and John F. Ellis, ex-postmaster both residing in Augusta, an only daughter, Mrs. Mary Valentine, residing at New Castle, Ky., and a son, David residing at Davenport, Ia. Dr. David Ellis went to California during the gold excitement of 1849, but subsequently returned resuming his medical studies at the University of Louisville, Ky., graduating from that institution in 1852. He at once settled in Augusta. He became prominent in the affairs of his party and was a delegate to nearly every state convention. He was elected a delegate to the constitutional convention of Illinois in 1870 and was a delegate to the national convention that nominated Tilden. In 1874 he was appointed with Gen. John C. Black, by Governor Palmer to represent Illinois at the Cincinnati meeting to consider the removal of the national capital to the Mississippi valley.

State Items.

Dr. John Ridlon now has his office at 92 State street.

Dr. Bayard Holmes has removed his office to 92 State street.

Dr. W. A. Quinn has removed his office to 100 State street.

Dr. K. A. Norderling has removed his office to 100 State street.

Dr. L. L. Beehler has moved his office to 4603 Indiana avenue.

Dr. Frank Billings is spending the summer at Mackinac Island.

Dr. L. L. McArthur is spending the summer at Mackinac Island.

Dr. Arthur R. Edwards has removed his office to 100 State street.

Dr. J. Clarence Webster is spending the summer in New Brunswick.

Dr. Fenton B. Turck has moved his residence to 151 Rush street.

Dr. W. J. Garard, homeopath, of Mendota, has recently located at Rutland.

Dr. S. C. Plummer has returned from an extended trip in Italy and Switzerland.

Dr. W. C. Van Benschoten has moved his office to 369 East Sixty-Third street.

Dr. George J. Dennis announces the removal of his office to suite 1002, 96 State street.

Dr. R. B. Preble has been appointed to the Medical Staff of St. Luke's Hospital, Chicago.

Dr. R. S. Pattillo announces an office at 709 Venetian building. Practice limited to the eye.

Dr. George N. Kreider of Springfield, is spending his summer vacation in Switzerland.

Dr and Mrs. Schenck, Mount Carmel, started July 4 for a four months' trip abroad.

Dr. Frank Allport has been appointed trustee to the Illinois Charitable Eye and Ear Infirmary.

Dr. Jennie Lyons of Hume has moved to Champaign and opened an office in the Illinois building.

William Whitford sailed for Europe June 23 to attend the meeting of the British Medical Association.

Dr. T. J. Pitner of Jacksonville, ex-President of the State Society is spending the summer in Michigan.

Dr. Edward H. Thomas, Augusta, has resigned as trustee for the Illinois Hospital for the Incurable Insane.

Dr. P. C. Thompson and wife and **Dr. Byron Gailey** and wife of Jacksonville are spending the summer in Europe.

Consumption Leads Pneumonia.—Pneumonia is beginning to give place to consumption as a principal cause of death.

Dr. R. B. Preble who is spending the vacation weeks at Sault St. Marie, Mich., returns to Chicago about August 15th.

Dr. J. Elliott Colburn has been made professor of ophthalmology in the Chicago Eye, Ear, Nose and Throat College.

Lawrence County Medical society held its second meeting July 15th, at which time the organization of the society was completed.

The 'Northwestern University Medical School graduates the largest class in its history this year. The class numbers over one hundred and thirty.

Dr. Louis C. Taylor, Springfield, has been appointed assistant surgeon-general, rank lieutenant colonel, and has been assigned to the Fourth brigade.

Dr. Wm. P. Marshall of Long Point, has convalesced from a recent severe illness and is again discharging his usual professional duties interrupted by his sickness.

Dr. J. T. McNally of Carbondale, ex-President of the Illinois State Medical Society, has gone to Colorado on account of ill health and will remain there until October.

Dr. J. A. Patton, assistant Professor Materia Medica and Chemistry in Rush Medical School, sails for Europe August 8th, and will spend a year of study in Berlin and Vienna.

A Polylingual Medical Dictionary Under Way.—**Dr. Karl von Klein** of Chicago is compiling a medical dictionary which aims to include all medical terms in every language.

Hospital Site Donated.—A valuable piece of land at Kewanee has been given for the proposed Catholic Hospital. The building will be erected this season and will cost about \$35,000.

Efforts are being made to organize medical societies in Effingham and Jasper counties with fair prospects of success. Councillor Barlow is giving his personal attention to these counties.

Hospital Additions Delayed.—The proposed additions to the Cook County Hospital and the Dunning Institutions have been delayed on account of inability to dispose of bonds at 3½ per cent.

Dr. W. W. Essick of Murphysboro is at Old Point Comfort attending the meeting of the R. R. Surgeons of the Southern System. He will visit Washington and Philadelphia before returning.

Dr. Cary Culbertson and wife, Piper City, prior to their departure for Europe, were given a reception at which a handsome steamer rug was presented to them. Their objective point is Vienna.

Dr. Lewis R. Bevans of Toluca, a physician of southern Alabama before the Civil War, and of a large and varied experience of nearly sixty years, is now an invalid at more than four score years of age.

Hot Weather Kills.—The week ending July 4th, showed the result of the sudden onset of hot weather in Chicago as 563 deaths were recorded, an increase of 109 over the preceding week, or about 24 per cent.

Dr. Norman M. Harris, associate professor of bacteriology at the Johns Hopkins Medical School, has accepted the position of first assistant to Dr. E. O. Jordan, professor of bacteriology at the University of Chicago.

The Harvey Medical College has raised its tuition to \$200 for forty weeks' work of twenty hours a week from September to June, inclusive. This is the highest tuition of all of the medical colleges west of the Alleghanies.

Smallpox.—Only two new cases of smallpox were received at the Isolation Hospital at Chicago during the week ending June 20. One child 28 days old died, fifteen were discharged eighteen remained under treatment.

Dr. W. S. Christopher has resigned from the chair of Pediatrics at the college of Physicians and Surgeons, Medical Department of the University of Illinois. Dr. Frank B. Earle has been appointed to succeed Dr. Christopher.

Dr. F. Gurney Stubbs has opened an office in the Venetian Building. Dr. Stubbs has recently returned from Europe where he spent one year as assistant to Dr. M. Hajek in Vienna doing special work in Ear, Nose and Throat.

Dr. Moreau Brown has resigned as Professor of Larynx, Rhinal, and Othology at the College of Physicians and Surgeons, Medical Department of the University of Illinois. Dr. W. L. Ballenger has been appointed to succeed Dr. Brown.

Chicago Medical Missionary Association.—Permanent organization was perfected May 23, with the following Medical officers: Dr. William E. Quine, president; Isaac N. Danforth, vice president and Dr. Elmore S. Pettyjohn, secretary.

Dr. C. S. Bacon has been elected Professor of Obstetrics in College of Physicians and Surgeons, Medical Department of University of Illinois. Dr. Andrew McDemund has been appointed associate Professor of Obstetrics in the same school.

Dr. E. C. Dudley has been reappointed a member of the board of education. Dr. Albert C. Eyclesheimer, assistant to the chair of Anatomy at the University of Chicago, has resigned to accept the chair of Anatomy in the University of St. Louis.

Bartonville Cottage Contracts Let.—The board of trustees of the Illinois Hospital for the

Incurable Insane, Bartonville, has awarded the contract for the erection of eight cottages to a Peoria contractor whose bid was \$23,000 higher than the lowest bid made.

Dr. E. L. Burch a former citizen of Robinson and an active worker in the Crawford County society is in Colorado because of disease of the lungs. He is much improved and is now located in Denver, where he is practicing his profession. His address is 639 17th avenue.

Dr. Philip F. Gillett, assistant physician at the Illinois Northern Hospital for the Insane, Elgin, has resigned, and will practice in Rockford. He has been succeeded by Dr. Joseph M. Kearney, formerly assistant at the Cook County Hospital for the Insane, Dunning.

New Building for State Hospital.—The contract has been let for a new building at the Illinois Western Hospital for the Insane, Watertown, to be constructed at a cost of \$101,900. The new building will add 400 to the capacity of the institution, making a total capacity of 1,200.

Dr. John J. Taylor, one of the earliest physicians of Streator, and a volunteer of the 20th Illinois Infantry Regiment in the Civil War, also a long time secretary of the LaSalle County Medical society, continues in a very delicate state of health, having been ill for several months past.

Physician Gives Estate to College.—By the will of Dr. Hiram K. Jones, whose death occurred June 16, his entire estate, valued at \$75,000, with the exception of a few legacies to be paid therefrom, was bequeathed to Illinois College, Jacksonville, with which he was connected for many years.

Dr. Rochelle Yarros has gone to Europe for a year to study. Dr. W. L. Ballenger has been elected to the chair of Othology, rhinology and laryngology, made vacant by the resignation of Dr. Moreau R. Brown. Dr. Frank Allport has been elected clinical professor of ophthalmology in Northwestern Medical School.

Dr. Joseph Stout of Ottawa, one of the oldest physicians of LaSalle county and a member of the early local society whence emanated the first call for a meeting to organize the Illinois State Medical Society, is now, at more than eighty-two years of age, a confirmed invalid and confined to his home in that city.

The Journal of the Illinois Medical College, which has been known as The Bacillus, appears in June as The Illinois Medical Bulletin, announcing that from now on it will enter the field of general medicine with field greatly broadened. Dr. Seth Scott Bishop is the editor and Dr. Foster Frutchey is business manager.

Dr. C. Barlow has the following to say to the secretaries of the county societies in the Seventh Councillor district: It is very desirable that a full and prompt report of local meetings

be sent to the Illinois Medical Journal for publication so that the profession may know just what you are doing in your respective counties.

Commencements.—Jenner Medical College held its graduating exercises June 30. Dr. G. Frank Lydston delivered the doctorate address on "The Young Man's Way to Success." Harvey Medical College was on June 27. Carl Sranter Nicanor Hallberg, Ph. G., on whom an honorary degree was conferred, gave the address.

Warning.—A correspondent in Lewistown, Fulton County, warns against Dr. A. A. Potterf, an advertising itinerant, who has been advertising to cure all diseases free of charge. He was fined \$100 and costs but escaped without payment of the fine. The sheriff of Fulton county would be glad to know of his whereabouts.

Englewood Hospital Incorporated.—Englewood Hospital and Training School will replace the Englewood Union Hospital which will surrender its charter. The plan contemplates the purchase of land for \$20,000, on which to erect an \$80,000 hospital which will accommodate 148 patients. The equipment of this building will cost \$20,000.

Illinois Medical College Changes.—Drs. J. F. Presnell, late surgeon U. S. V., and Frank Byrnes, have been elected junior professors of surgery. Dr. William F. Waugh has severed his connection with the college. The college has completed its new buildings, one of which is for Anatomical laboratories and the other for training school for nurses.

Cornerstone Laid.—The cornerstone of Logan Hall, a building to be used for school rooms, gymnasium and dormitories for children under 10 years of age, was laid at the Beverly Farm Home and School for Nervous and Backward Children, Godfrey, July 18. The building will cost \$5,000, and will increase the capacity of the institution to 50.

Dr. Frank Billings enjoys the unique distinction of being the only man who has thus far occupied the post of president of the American Medical Association for two consecutive years. At the New Orleans meeting, under the new regulation of the Association which was adopted, the president elect will assume office at the opening of the succeeding session.

Same Mortality.—The total of 563 deaths recorded for the week ended July 11, was the same as that of the previous week. Among these were 26 from sunstroke, and, as other direct results of high temperature an increase of 33 deaths from acute intestinal diseases, "convulsions" and the nervous diseases. Only seven deaths were reported from typhoid fever, as compared with 11 during the week before.

Exercises at Rush.—On the 17th of June 180 students including six women received degrees at the convocation of Rush Medical College. Dr.

Simon Flexner of Philadelphia, made the doctorate address on "An Era of Medical Discovery." Dr. Frank Billings, dean of the faculty, announced that the major portion of the \$1,000,000 required to secure the \$8,000,000 required for hospital and advanced clinical work had already been secured.

The banquet given by the Crawford County Medical society Thursday evening, July 16th, was well attended and general good humor prevailed. The social functions of this society are always inspiring, there being no quarrels amongst the physicians of this county. This may be attributed to the mutual interests and work in our society.

Dr. S. D. Meserve, the nestor of the profession in Crawford county was unable to attend.

A Chicago Hospital Sued for \$80,000.—In a suit filed on June 15th in the Circuit Court of Chicago, the directors of the Chicago Union Hospital are made the defendants in the action for the recovery of damages to the amount of \$80,000, by Robert R. Clark, on the ground that neither a permit from the city, nor the necessary frontage consents were secured by the hospital, and that the plaintiff's property had suffered deterioration through the proximity of the hospital.

"The Christian Hospital."—By this name an institution has been thriving in Chicago, the plan of which is to dispose of "memberships" on the staff of the hospital. For twenty-five dollars, the maximum fee, the applicant's received a "beautifully engrossed certificate which imparts confidence to patients," while, for other sums "official buttons" and other insignia wherewith to impress the credulous were retailed. The institution is under consideration by the federal grand jury.

To Study Colleges Abroad: Dr. E. Fletcher Ingals, who has a prominent part in bringing Rush Medical College into organic relation with the University of Chicago, will leave this week for Europe to be gone until the middle of September. He will visit all of the large schools of medicine in Vienna, London, Paris and Berlin. It is understood that the trip is taken with a view to getting suggestions for the enlargement of the college. Dr. Ingals will also attend the meeting of the British Medical Association.

Dr. Lucius G. Thompson of Lacon, who, since the recent death of his professional colleague, Dr. Robert Boal, is now the only surviving member of the medical profession in attendance at the organization of the Illinois State Medical Society at Springfield in 1850, is enjoying a fair state of health at almost eighty-two years of age, notwithstanding that, on the death of his fellow townsman, Dr. D. E. Thomas, some months since, his death was repeatedly though happily erroneously announced even by some medical journals.

Alumni Week at Northwestern.—The exercises of Alumni week were held at Northwestern University Medical School about 200 alumnae

were in attendance. Special clinics were held as usual during the week, and for the banquet which had been planned in the Auditorium Hotel, an al fresco lunch with student waiters in the Physiological Laboratory was substituted on account of the strike of the waiters. Dr. Archibald Church was toastmaster. The speakers were: President James, Hon. A. N. Waterman, Rev. I. A. White, and Frederick Greeley.

A Warning and a Request.—The Medico legal department of Chicago Medical Society announces that a man, claiming to be Dr. Theo. Jennings, robbed the office of Dr. Dickey, of Toledo, Ohio, last week. On Saturday Dr. Byron Robinson cashed a check for him to which he had forged Dr. Dickey's name.

He is about 5 ft. 8 in. tall, disheveled in appearance and very nervous in manner.

Any physician knowing of his whereabouts kindly notify Chicago detective department, or Dr. W. A. Evans, 103 State street, Chicago, Ill.

"The Journal of Infectious Diseases," a new magazine to be established at the University of Chicago, has been endowed by Mr. and Mrs. Arnold F. McCormick, the parents of "Little Jack," John D. Rockefeller's favorite grandson, whose death from scarlet fever three years ago inspired the establishment of the Rockefeller Institute for Medical Research. It is believed the eventual endowment fund will be about \$125,000. The magazine is to be distributed free of charge to libraries and to sanitary experts of the various cities. Dr. Ludvig Hektoen, head of the department of pathology and bacteriology at the university, and Dr. Edwin O. Jordan, associate professor of bacteriology, are to be the editors. The first number will appear from the University of Chicago Press January 1. This Journal will mark a great advance in giving to the world the results of all investigations in this line as well as the original work at the University by its eminent editors.

The corner stone of "Logan Hall" was laid July 18th at "Beverly Farm" Home and School for Nervous and Backward Children at Godfrey, Ill., in the presence of a large number of friends from St. Louis, Jerseyville, Alton and surrounding country. After the ceremonies lunch was served on the spacious lawn and under the wide spreading maples.

The ceremonies were held in conjunction with a meeting of the Alton Horticultural Society of which Dr. Smith, the Superintendent, is a Vice President, and consisted of an invocation by the Rev. John Alworth followed by the singing of "America." Dr. Smith gave a brief history of the work in this country and of the hopes and aims of the school. The new "Logan Hall" is of brick construction with rock faced brick trimmings, and is 40x60 feet, two stories high. This addition increases the capacity of "Beverly Farm" to fifty children and will greatly add to the equipment necessary to the best development of these mentally deficient children upon whom the requirements of a normal education impose too great a burden.

The Department of Pathology in the Northwestern University will enjoy larger facilities and more extensive equipment at the opening of the Fall term. Floor space to the extent of an area of 60x110 feet is being fitted for laboratory purposes. A space 50x60 feet is to be divided into small rooms to be used by small classes for research work.

The following officers and executive committee were elected to serve for the ensuing year: N. S. Davis, dean; W. S. Hall, junior dean; Arthur R. Edwards, secretary. Executive Committee, Edward James James, president of University; N. S. Davis, dean; A. R. Edwards, secretary, members ex-officio. Other members, G. W. Webster, E. C. Dudley, Weller Van Hook, R. B. Preble, E. W. Andrews, S. C. Plummer.

The faculty of the Northwestern University Medical School has passed a rule that no student shall be admitted to the Senior class without special permission from the Faculty or the Executive Committee.

Other State Societies.

Nebraska State Medical Society has reorganized and adopted the constitution and by-laws suggested by the American Medical Association.

Montana Medical Association.—Resolution for the examination of eyes and ears of all school children as recommended and practiced by the Illinois State Board of Health was adopted.

Indiana State Medical Society met in annual session at Richmond, June 4, and on the following day adopted the plan of organization recommended by the American Medical Association, without modification and by a unanimous vote.

South Dakota State Medical Association at the twenty-second annual meeting, held in Mitchell, May 27 and 28, 1903, the report of the committee, which was favorable to the plan of the American Medical Association, was adopted without change.

The State Society of North Carolina, held its meeting at Hot Springs on June 1, 2 and 3, the new reorganization plan met with some opposition, mostly on the part of the older members, but when it was more fully demonstrated that the plan would strengthen the society, confirm and uphold the law, the opposition was readily withdrawn.

Maine Medical Association. Fiftieth annual meeting held in Portland, June 3, 4 and 5, 1903. President, Dr. Hiram Hunt, Greenville, in the chair. Dr. Charles A. Hunt, Portland, delivered the historical address. Result of election of officers: President, Dr. Augustus S. Thayer, Portland; First Vice President, Dr. Frederick L. Dixon, Lewiston; Secretary, Dr. Albert H. Sturtevant, Augusta; Treasurer, Dr. Arthur S. Gelson, Portland.

Reorganization in New Jersey.—The Medical Society of the State of New Jersey held its one hundred and thirteenth annual meeting, June 23, 24 and 25 at Asbury Park. A report was presented by the committee of which Dr. Philip Marvel, Atlantic City, was chairman, recommending the adoption of the American Medical Association plan, with only such modifications as might be necessary to conform to the ancient charter of the society. It was later adopted by a unanimous vote. This is the oldest society in the United States.

Ontario Medical Association.—The annual meeting was held in Toronto June 16, 17 and 18. Dr. J. C. Mitchell of Toronto, presided, and Dr. H. C. Parsons, Toronto, acted as secretary. Dr. J. H. Musser, Philadelphia, President elect of the American Medical Association, was present and delivered a very able and practical address on the treatment of pneumonia. In moving a vote of thanks to Dr. Musser, Dr. N. A. Powell jocularly referred to the powerful influence the Ontario Society wielded in electing the presidents of the American Medical Association. Some years ago Dr. Henry A. Marcy, Boston, was a guest of the Association and the American Medical Association promptly made him President. Then followed John A. Wyeth with a similar result, and now the good record has been kept up in Dr. Musser.

Dr. Thomas S. Cullen, Baltimore, presented a paper on Uterine Myomata. Mr. I. H. Cameron stated it to be the best ever written on the subject. Hon. W. R. Riddell, K. C., Toronto, in speaking of medical witnesses said he divided all liars into three classes: liars, d—d liars, and medical experts.

Connecticut Medical Society.—The one-hundred and eleventh annual meeting was held in Hartford, May 27 and 28, under the presidency of Dr. Gould A. Sheldon, Sheldon.

The committee on tuberculosis reported that of the 696 members of the society only 115 had replied to the circular letter sent them by the committee, which did not feel justified in reporting such as representing a consensus of opinion of the society. The president, in his address, commented favorably upon the organization scheme as proposed by the American Medical Association, and on the elevation of the standard of Medical education, approved by the American Medical Association of Medical Colleges and by the American Medical Association. The following officers were elected. President, Dr. Samuel B. St. John, Hartford; Vice President, Dr. William H. Carmalt, New Haven; Secretary (for four years) Dr. Nathaniel E. Wordin, Bridgeport; Asst. Secretary, Dr. Henry S. Miles, Bridgeport; Treasurer, Dr. Willaim W. Knight, Hartford; and delegate to the American Medical Association, Dr. L. Duncan Bulkeley, Norfolk. Chas. F. Wells, a son of Dr. Horace Wells, the discoverer of Anaesthesia, presented the society with a portrait of his father taken in 1825.

Medical Organization. Minnesota was the last of four great states to set aside its action of partial reorganization of last year and adopt the constitution and by-laws recommended by

the American Medical Association in full. The annual meeting was held at St. Paul, June 17 to 19. While much had been accomplished during the year and membership had increased, the new plan of organization was defective and unsatisfactory. No provision was made for a house of delegates or council, and membership in county societies was left optional. Dr. W. S. Fullerton, an enthusiastic worker, was appointed state organizer. He visited and organized 58 counties during the year, and laid the foundation for a complete organization. After his return from the New Orleans meeting Dr. J. W. Andrews, president of the State Association, began an active campaign for the adoption of the uniform plan of organization. His annual address was largely devoted to it. At its close, a committee was appointed to consider the question, with instructions to report during the meeting. The committee upon the following day recommending that the action of last year be rescinded and the uniform plan of the Association be substituted therefor. This was done by a unanimous vote. An effort should be made to make such meetings as enjoyable and profitable as possible. A suggestion would be that the program be so arranged that all classes would be interested at least part of the day, and not be confined to section work. It may be interesting to note that twenty-eight states have now adopted the uniform plan of organization. J. N. McCormack.

CHICAGO'S HEALTH.

Some items from the Bulletin of Health issued by the health department of that city each week during the past month may be of interest.

The population of Chicago is now estimated at about 2,000,000 (to be exact 1,988,870.)

Computed on the figures of population obtained by the English method Chicago's death rate for last month would be 15.83 per 1,000 of population; on the Directory figures it would be 16.23; while on the Department's figures it was made 16.69, or more than 5 per cent greater than might be technically claimed on the highest recognized statistical authority.

If the English method should be generally adopted in this country Chicago would undoubtedly fall in line, in which event its mid-year population of 1904 would be, officially, 2,096,268, and the "Two-Million Club" might set its stake still higher.

The health department has the following to say regarding the new milk ordinance:

One object of the new milk ordinance is to protect the poor—by compelling "skim milk" to be sold only from cans painted a bright red, so that the purchaser shall know the quality of the contents of the Red Can.

Milk is not only the staple article of food for the young, but also for many classes of invalids. The bottles and other vessels containing it are often carried into sick rooms and handled by nurses and others in attendance on contagious-disease cases. They thus frequently become infected with disease germs. Many outbreaks of diphtheria, scarlet fever and

typhoid fever have been clearly traced to milk carried in such infected vessels.

Another object of the new Ordinance is to protect poor and well-to-do alike—by compelling the thorough cleansing, with soap and boiling water (sterilization), of all bottles and other milk receptacles before being again used. No germ can survive soap and hot water.

In defense of the work of the health department and as an answer to the demand of certain Chicago newspapers and others for an investigation of the department Arthur R. Reynolds uses the following language and challenges "a complete overhauling:"

During the six years, 1891-1896, immediately preceding the present administration of the department, a total of 152,424 deaths were reported in Chicago; during the six years, 1897-1902, of the present administration, the total deaths reported were 145,907, or 6,517 fewer deaths in upwards of 360,000 more population. The reduction is even greater among infants and young children—the acknowledged test of the efficiency of a sanitary administration. During the first period there were 68,008 deaths under five years of age; during the second period there were only 49,360 such deaths. This is a reduction of 18,648 deaths of the under five in the increased population above shown.

The total 563 deaths recorded by the Bureau of Vital Statistics up to the close of office hours on the 11th was precisely the same as that of the previous week. Among these were twenty-six from sunstroke, and, as other direct results of high temperature, an increase of thirty-eight deaths from the acute intestinal diseases, "convulsions" and the nervous diseases. Only seven deaths were reported from typhoid fever as compared with eleven during the week before.

No assurance of escaping the usual seasonal increase of this disease may be based on this decrease in the number of reported deaths. On the contrary, the Department is gravely apprehensive of a much greater and more general prevalence of typhoid during the next three months than occurred last year. Then the outbreak was purely local—confined to the area supplied with water from the Harrison street pumping station, which was polluted with sewage in the station itself, through a constructional blunder when the plant was established in 1887.

Now there are unmistakable evidences of pollution by sewage and by street washings in many water supply areas, due to the semi-tropical downpours of last Thursday and Friday evenings.

If the Department had the authority it would make it a penal offense for parents and other guardians of the young to allow children to drink untreated hydrant water during the next three or four months. Employers also, as has before been urged, should be held responsible for the purity of the water furnished their employes for drinking purposes. Lacking this authority, the Department can only rely upon the public press to emphasize this general warn-

ing and to reiterate the advice to "boil the water."

REPORTS OF BIRTHS AND DEATHS.

The New Law.

For the information of all physicians as to their duties we publish in full the new law requiring reports of Births and Deaths. The loss of the Burial Permit required by law of 1901 is a serious defect and is due to the personal prejudice of a few influential politicians, notably Speaker Miller, who placed political expediency above protection from fraud and crime or the great good which comes to the state from carefully gathered and tabulated vital statistics.

The State Burial permit law of 1901 has been repealed to take effect on June 30th, 1903. No Burial Permit will be required thereafter except in cities which have ordinances requiring that a permit be issued before the interment or removal of a body. These ordinances are in no manner affected by the said law.

Under the law in force July 1st, 1903, physicians and midwives are required, under penalty, to report all births occurring in their practice, within thirty days, on the blank forms prescribed by the State Board of Health. Births are to be reported to the County Clerk, except in case of those occurring in the cities of Chicago and Peoria. Reports of these births are to be made to the representative Commissioners of Health.

A fee of twenty-five cents will be paid for each report of births made on the blank forms prescribed by the State Board of Health, to either the city or county officials.

It is the duty, therefore, of physicians and midwives to make reports of all deaths occurring in their practice, outside of the jurisdiction of cities having burial permit ordinances, to the State Board of Health, on the blank forms prescribed by the Board.

A fee of twenty-five cents will be paid for each report of death made to the State Board of Health on blank forms prescribed by the Board.

The State Board of Health has issued a circular in which it especially requests the hearty assistance and co-operation of the physicians of the State in the enforcement of the birth and death law. A rigid enforcement of the law will not only furnish the Board statistics of incalculable value, but will place Illinois at the head of all states in the matter of vital statistics. Physicians will not only materially aid in the enforcement of this law, but will also extend a courtesy to this Board if they will acquaint the midwives of whom they have knowledge with the requirements of the law. The Board has the addresses of but few of its licentiates in midwifery; hence this request.

The following is the full text of the law:

An Act requiring reports of births and deaths, and the recording of the same, and prescribing a penalty for non-compliance with the provisions thereof, and repealing certain acts therein named.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly: It shall be the duty of every physician and midwife in the State of Illinois who attends the birth of a child to make a report of said birth with the name of such child and such other information as may be required by the State Board of Health, within thirty days after its occurrence in writing, to the county clerk of the county in which the said birth takes place: Provided, that in cities of 50,000 or more inhabitants reports may be made to the city commissioner of health instead of the county clerk, if said commissioner of health so requests.

Such reports shall be made on blank forms prescribed by the State Board of Health, and shall contain such information as may be directed by said board in resolutions, copies of which shall be printed on the reverse of the blank forms aforesaid.

When no physician or midwife has been in attendance, then it shall be the duty of the parents (or) the householder, to make said report within the time and in the manner aforesaid.

Sec. 2. Every physician, midwife, parents or householder who shall comply with the foregoing provisions shall be paid for each report of birth made in the manner directed by the State Board of Health the sum of twenty-five (25) cents.

Sec. 3. Every city commissioner of health to whom reports of births are made shall deliver to the county clerk of the county in which the city is located, on or before the tenth day of each month, all reports of births received by him during the preceding month.

Sec. 4. It shall be the duty of every physician and midwife practicing in the State of Illinois to report, in writing to the State Board of Health, at Springfield, the death of any of his or her patients within thirty days after the date of said death: Provided, that in the case of death (deaths) which occur within the corporate jurisdiction of cities, the ordinance of which requires that the burial or removal permit shall be issued before the burial or removal of the body, and that before such permit shall be issued, a report or certificate of death shall be presented to the official by whom the permit shall be issued, no report need be made to the State Board of Health by the physician or midwife.

Sec. 5. It shall be the duty of the coroner to report, in writing, to the State Board of Health, any death coming under his supervision within ten days after he receives notice of said death: Provided, that this section shall not apply to deaths occurring within the jurisdiction of the cities referred to in section 4 of this act.

Sec. 6. All reports or certificates of death made by physicians, midwives, or coroners, either to the State Board of Health or to a city commissioner of health or other city official, shall be made in the manner directed by the State Board of Health on the blank forms prescribed by the State Board.

Sec. 7. Every physician, midwife or coroner who shall make a report, of death to the State Board of Health in the manner provided

for in the preceding sections shall be paid for each report the sum of twenty-five (25) cents.

Sec. 8. It shall be the duty of the commissioner of health, or the other city or village official in the cities referred to in section 4 of this act, by whom burial or removal permits are issued, and to whom certificates or reports of death are presented, to deliver to the State Board of Health at Springfield, on or before the tenth day of each month all certificates or reports of death presented to him during the preceding month.

Sec. 9. The State Board of Health shall make a record within ten days after their receipt of all certificates of death forwarded to it, and shall deliver such certificates on or before the first day of the succeeding month to the proper county clerk, with a list giving the names and addresses of the persons from whom the certificates were received.

Sec. 10. The fees provided for in sections 2 and 7 of this act are hereby made and declared to be a charge upon the county in which said fees may accrue, and the county clerk of the respective counties shall, upon the request of any person entitled to said fees in his county, issue to such person his warrant upon the county treasurer of said county for the amount of fees due such person under this act, and the county treasurer of said county shall pay the same upon presentation out of any money belonging to the county not otherwise appropriated: Provided, that no payment shall be made under the provisions of sections 2 and 7 of this act in the case of still births where the period of gestation is less than seven months.

It shall be the duty of the board of supervisors in counties under township organization, and the board of county commissioners in counties not under township organization, to appropriate such sums as may be necessary for said purpose.

Sec. 11. The county clerk of each county shall record in the manner directed by the State Board of Health all certificates of births and deaths delivered to him pursuant to law and shall file such certificates in his office. The record of such certificates shall at all times be opened to the inspection of the public without fee. Each county clerk shall also, during the first ten days of January, April, July and October of each quarter, render to the State Board of Health in the manner directed by said board, a full and complete report of all births reported to him during the preceding quarter.

Sec. 12. The State Board of Health shall prescribe such forms for reports of births and certificates of death as it may deem proper, and shall furnish a copy of each form to the county clerks of the several counties. It shall be the duty of the county clerks to have blank reports of births and certificates of death printed strictly in accordance with the forms prescribed by the State Board of Health, and furnish the same free of charge to the physicians, midwives and coroners: Provided, that in cities and villages the local board or department of health or the city or village clerk, as the case may be, may have printed blank certificates of death strictly in accord-

ance with the forms prescribed by the State Board of Health, and furnish the same free of charge to physicians and midwives. No report of a birth or certificate of a death shall be made by a physician, midwife or coroner except on a blank form such as prescribed by the State Board of Health.

Sec. 13. Any person or persons who shall violate any of the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof shall be fined not less than ten nor more than one hundred dollars, or shall be imprisoned in the county jail not to exceed thirty days, or shall suffer both such fine and imprisonment in the discretion of the court.

Sec. 14. All fines collected under the provisions of this act shall be paid into the county treasury of the county in which the suit is brought, to be used for county purposes, and it shall be the duty of the State's attorney in the respective counties to prosecute all persons violating or refusing to obey the provisions of this act.

Sec. 15. An act requiring reports of births and deaths and the recording of same, regulating the interment or other disposal of dead bodies, and prescribing a penalty for non-compliance with the provisions thereof, approved May 11, 1901, and in force January 1, 1902, and all acts or parts of acts in conflict, with the provisions of this act, are hereby repealed.

Approved May 6, 1903.

Local Societies.

The Washington County Medical Association met in the Court House in Nashville on July 9th, but owing to the excessive heat the attendance was very small. In the absence of the members who were to read papers, Dr. L. P. Schroeder gave an interesting talk on the difference between **Sarcoma** and **Carcinoma** to which Dr. R. E. Vernon replied. There being no further business the meeting adjourned.

J. J. Troutt,
Official Reporter.

Mercer County Medical Society held its quarterly meeting in the Masonic hall at Viola, Ill., July 14, 1903 in the Masonic Temple. In the absence of President H. H. Fletcher, Vice President C. W. Carter presided during both morning and afternoon sessions.

Papers presented by Dr. I. W. Ramsey and I. S. Hamilton on **Nephritis** and **Typhoid Fever** were ably presented. Lively discussion followed by all members present.

Adjourned to meet at New Windsor October 13, 1903.

A. N. Mackey,
Official Reporter.

Pulaski County Medical Society.—Below are names and addresses of members of Pulaski County Medical Society. There are 18 doctors in this county and 16 belong to the society. Members as follows: B. F. Brown and Ben Crabtree, of Pulaski; C. J. Boswell and R. M.

Fulkerson, of Beechwood; A. W. Tarr and Monroe Doty, of Grand Chain; W. C. Rife and B. A. Royal, of Villa Ridge; L. F. Robinson and J. B. Mathis, Jr., of Ullin; W. J. Whitaker, of Olmsted; M. L. Winsted, of Wetang; J. F. Hargan, Hall Whitaker, J. B. Mathis, Sr., C. B. Powell, of Mound City, making in all 16 members. The other two physicians of the county have been suspended for non-payment of dues. It is hoped that they will renew their membership.

A. W. Tarr,
Official Reporter.

The Peoria City Medical Society for Peoria County met Tuesday evening, April 21, 1903, at the National Hotel, and was called to order by the 1st Vice President, L. A. McFadden.

The members present were: McFadden, Hanna, Will, Marcy, Kerr, E. L. Davis, C. E. Davis, Roskoten, Brown, Collins and J. V. Studer.

O. B. Will read the paper of the evening on **Educational Opportunities and Needs of Our Civil Courts from a Medical Standpoint**, which was discussed by Marcy, Hanna, J. V. Studer, C. E. Davis, Collins and Roskoten.

M. S. Marcy called the attention of the Society to the slight offered Dr. E. M. Sutton by the State Medical Society in withholding his name as Secretary of the Surgical Section and substituting therefor the name of someone else.

Dr. O. B. Will made a motion that the Society instruct its delegate to inquire why Dr. Sutton's name was omitted. Carried.

Adjourned.

C. U. Collins,
Official Reporter.

The Peoria City Medical Society for Peoria County met Tuesday evening, May 19, 1903, at the National Hotel, and was called to order by the President, R. A. Hanna.

In the absence of the Secretary, W. R. Allison was appointed Secretary pro tem.

The members present were Stephenson, Marcy, Brobst, Kerr, E. L. Davis, E. Franc Morrill, Jeannette Wallace, Hanna, Allison, Sutton, Will, S. M. Miller, and J. V. Studer.

M. S. Marcy read an interesting paper on **Meningitis**, and presented the history of several cases occurring under his care. The paper was discussed by a majority of those present.

E. M. Sutton reported a case of **Sarcoma** of the Thyroid which had been presented to the Society some three weeks before.

Adjourned.

C. U. Collins,
Official Reporter.

The Peoria City Medical Society for Peoria County met Tuesday evening, June 2, 1903, at the National Hotel.

The members present were Stephenson, Roskoten, Gunn, Kerr, Marcy, Sutton, Horwitz, Allison, Weber, Hanna, Jeannette Wallace, S. M. Miller, Green, W. T. Sloan, Shepperd and Collins.

Bills from the Western Union Telegraph Co., for 96 cents; C. H. Probst for \$4.00, and C. U. Collins for \$3.00 were presented and allowed.

R. A. Kerr reported that it was impossible to find out who was responsible for the omission

of Dr. E. M. Sutton's name as Secretary of the Surgical Section of the State Society.

By presenting the facts to the surgical section, Dr. Sutton was unanimously elected its Chairman for the present term.

Dr. Kerr also made a report as delegate to the State Society.

S. Horwitz moved that the report be accepted and the thanks of the Society be voted to Dr. Kerr for his success in the matter. Carried.

E. M. Sutton thanked the Society for its interest in his behalf.

R. A. Kerr moved that the Society request the Program Committee to secure Dr. Hektoen of Chicago for a paper at the next meeting. Carried.

S. M. Miller moved that a committee of three be appointed to confer with the Dental Society of this city to see what can be done toward securing a permanent meeting place for the two societies. Carried. The committee appointed was S. M. Miller, E. M. Sutton and O. J. Roskoten.

The paper of the evening was read by Dr. Willard Bartlett of St. Louis, on **A New Filigree for the Repair of Large Defects in the Abdominal Wall**.

The following is a synopsis of the paper:

1. A recital of the conditions in which it is impossible to effect a cure by auto-plastic means; some form of artificial support which can be permanently incorporated in the tissues is here of value.

2. A historical resume of the attempts which have been made in this direction up to the time of the proposal of the author's filigree.

3. A discussion of the faults which experience has shown the older appliances to possess as well as the author's attempts to obviate them.

4. The author's filigree and the method of its insertion.

5. Animal experimentation to demonstrate the pressure or tension which such a contrivance is capable of resisting when properly incorporated in the abdominal wall.

6. A discussion of the effect of such a contrivance on the development of the abdominal wall.

7. A recital of the seven cases in which the author has successfully used his filigree.

8. The evident conclusion that such a contrivance is of undoubted value though there be nothing but peritoneum behind it and nothing but skin in front of it.

The paper was a most excellent one and showed great ingenuity, talent and originality on the part of the essayist. The paper was accorded a liberal discussion by Drs. Roskoten, Kerr, Marcy, Sutton, Allison, S. M. Miller, Collins and Hanna.

R. A. Kerr moved that a vote of thanks be extended to Dr. Bartlett for his kindness in favoring the society with his paper. Carried. Adjourned.

C. U. Collins,
Official Reporter.

The DeWitt County Medical Society convened in the Court House July 14, 1903, at one o'clock

p. m., pursuant to adjournment. President J. C. Myers in the chair.

The minutes of the last meeting were read and approved. The new order of things, by which our society has become a component part of the State Society was discussed by all members, and on motion the secretary was directed to notify all members not present of the action taken, and requested to forward their dues without delay. Dr. Guy G. Dowdall read a lengthy and interesting paper on the **Pathology and Treatment of Rheumatism** in its different phases. Nearly all members present gave their views and treatment of this disease.

Drs. D. W. Edmmiton and Robertson were appointed essayists for the next meeting to select their own topics.

J. H. Tyler,
Official Reporter.

Crawford County Medical Society met at the office of Drs. Firebaugh and Barlow, Robinson, Ill., May 14, 1903. Members present: Cato, Dunham, Wattleworth, Newlin, Kirk, T. N. and H. N. Rafferty, Price, Barlow, Fuller and Cooley.

Dr. Firebaugh presented an excellent paper covering a variety of cases, among others a fatal case of **Angina Pectoris**, in which the pain was always referred to right side. Paper was thoroughly discussed. Other members presented cases, which were followed by general discussion. Dr. J. M. Mitchell of Oblong, was elected a member by acclamation. Steps were taken to modify constitution so as to conform to the new plan of organization, etc.

Arrangements were made for a banquet to be held after annual meeting in July. Drs. T. N. Rafferty, Fuller, Meserve and Kirk were appointed to prepare papers for July meeting.

E. M. Cooley,
Official Reporter.

The **Crawford County Medical Society** held its annual meeting at Robinson, on the afternoon of July 9, 1903.

Among those present were Drs. Dunham, A. G. Meserve, Firebaugh, T. N. Rafferty, C. Barlow and H. N. Rafferty, of Robinson; Voorheis and Cato of Huntsville; Weir of West Union; Price of Eaton; Cooley, Kirkland Edwards, of Oblong; McGowen, Gordon and Fuller of Palestine, and Hoskinson of Trimble.

The scientific program consisted of a symposium on **Cholera Infantum and Dysentery**. Drs. Fuller of Palestine and T. N. Rafferty of Robinson read papers on Cholera infantum, and Drs. Kirk of Oblong and A. G. Meserve of Robinson on Dysentery. These subjects were very appropriate to the season and by far the most important point brought out by the papers and discussion following was that of prophylaxis—that the bowel disorders of infants and children occurring so frequently and with such high mortality during the summer months are due nearly always to improper feeding, and not to "teething" and other mythical causes so often ascribed by the laity. It was emphasized that the sooner the mothers of our nation were educated to breast feeding and proper substitute feeding and good hygiene for their offspring, the sooner

would our present high infant mortality be lowered.

This being the annual meeting of the Society, officers for the ensuing year were elected as follows: J. W. Kirk, Oblong, President; C. E. Price, Eaton, Vice President; H. N. Rafferty, Robinson, Secretary; C. Barlow, Robinson, Treasurer; C. H. Voorheis, Hutsonville; W. H. Hoskinson, Trimble; G. W. Fuller, Palestine, Board of Censors.

Dr. Ralph Gordon of Palestine was elected a member of the society, and after other business was transacted, the society adjourned, to re-assemble around the banquet table at Lyon's Restaurant at seven o'clock in honor of the twenty-third anniversary of the birth of the society. Among the guests of the society at the table were Drs. Wm. Eaton of Hutsonville, and C. M. Eaton of Robinson, and medical students Weir, Fierbaugh and Low.

It was unanimously voted to send to Dr. E. L. Birch of Denver, Colo., the society's regrets at his absence, together with its best wishes for his future good health and success in his new location.

After the festal board had been cleared, Dr. T. N. Rafferty, acting as toastmaster introduced the speakers of the evening, who responded as follows:

1. "Our Medical Society," C. Barlow.
2. "Sparks from the Engine," I. L. Firebaugh.
3. "Whatsoever a man soweth, that also shall he reap," E. M. Cooley.
4. "The Doctor's Day Off," T. J. McGowen.
5. "The Doctor as an Epicure," C. E. Price.
6. "The Doctor as a Business Man," A. G. Meserve.

The society expects to have an unusually prosperous year, and hopes to celebrate its twenty-fourth anniversary in like manner.

H. N. Rafferty,
Official Reporter.

The Bond County Medical Society held its regular quarterly meeting in the Court House in Greenville, on July 2d. The society was called to order at 1 p. m., by Vice President J. A. Warren. Various topics of interest was discussed relative to the welfare of the profession. Among the most important was the new medical bill that was killed in the Judiciary Committee of the last legislature. Others was illegal practicing. The secretary reported that Dr. J. W. Hoagland of Smithboro, Bond County, had left between two suns. He had been practicing with State License. Dr. E. A. Glasgow presented a paper on **Diarrhoea in Children**. This paper showed that the doctor had given much thought and study on this subject. Dr. B. F. Coop, of Greenville, read a paper on **Otitis Mediae** which was an excellent article. No doctor can write on this subject properly unless he has had the personal experience.

Our society is alive, active one, but small, and we hope to do good work in the future.

William T. Easley,
Official Reporter.

North Shore Branch.—The North Shore Branch of the Chicago Medical Society held its

regular annual meeting June 2, 1903, at 1884 Evanston Ave. Following the usual scientific program the officers were elected for the ensuing year as follows: Maximilian Herzog, Chairman; Alben Young, Vice Chairman; Geo. Edwin Baxter, Secretary; Alben Young, Councilor. Committee on Organization, J. P. Houston, south subdistrict; G. W. Green, west subdistrict; Bertha Bush north subdistrict; George Tarnowsky, east subdistrict.

Reports of the various officers showed the society in very good working condition. The district is fairly well organized. There are about 160 legalized physicians in the district, 65 are members of the Chicago Medical Society. There are 55 regular physicians not members, and 95 physicians of all schools who are not society members. The average attendance is about 17.

George Edwin Baxter,
Official Reporter.

Fulton County Medical Society.—The twenty-third meeting of the Fulton County Medical Society met in regular session, called to order by President Roberts, at 1:30 p. m.

The following members were present: Drs. Robb, Roberts, S. A. Oren, Strode, Stoops, W. R. Blackburn, T. R. Plummer, Blackstone and Ray.

Minutes of the previous meeting were not present.

The applications of Dr. R. Richards of St. David and Dr. S. L. Oren of Lewistown were received and were referred to committee on membership.

Dr. Stoops reported a case of **Injury to Rectum** by falling on a pitchfork handle which penetrated the anterior wall of rectum about two or three inches from the external sphincter. Case discussed by Drs. Robb and others.

Receipts: Drs. Stoops, state dues, \$1.50; Strode, \$1.50; Blackstone, \$1.50; S. A. Oren, \$1.50; Baxter, \$1.50; Snively, county dues, \$4.00; total \$11.50. \$7.50 was remitted to State Secretary Weis for State Dues collected.

D. S. Ray,
Official Reporter.

The Edgar County Medical Society met July 1. Dr. T. C. McCord read a paper entitled **Summer Diarrhoea**. He advocated the use of Castor Oil cut with alcohol as used in the army while the doctor was in Cuba as surgeon of the Fourth Regiment. The paper elicited an enthusiastic discussion from every doctor in the house.

Those present were: N. P. Smith, Geo. H. Hunt, F. G. Cretors, L. O. Jenkins, F. D. Lydich, E. O. Laughlin, C. S. Laughlin, D. D. Roberts, T. C. McCord, W. H. Tenbroeck, Z. T. Baum, H. McKennan, and as a visitor Dr. Darley of Ramsey, Ill.

This was the most profitable meeting our county society ever had. Our next meeting will be the last Wednesday in September at which Dr. Z. T. Baum will read a paper on Typhoid Fever.

The officers of the society are: President, Dr. A. K. Moseley, Grand View; Vice President, Dr. N. P. Smith, Paris; Secretary, Dr. H. McKennan, Paris; Treasurer, Dr. C. S. Laughlin, Paris.

H. McKennan,
Official Reporter.

Adams County Medical Society.—The regular monthly meeting of the Adams County Medical Society was called to order in the Chamber of Commerce rooms July 13, 1903, by President W. W. Williams.

Members present: L. B. Ashton, G. W. Burch, A. H. Byers, R. J. Christie, Jr., H. O. Collins, W. E. Gilliland, W. S. Knapheide, O. F. Wellenreiter, W. W. Williams and John A. Koch.

The Committee on Entertainment and Refreshment was instructed to arrange for an outing in September and report arrangements at the August meeting.

G. W. Burch reported a case of **Chronic Posterior Urethritis of Non-Specific Origin.**

R. J. Christie, Jr., a case of **Chronic Atrophic Pancreatitis.**

G. W. Burch, a case of **Still-Birth** with enormous **Abdominal Ascites** in **Foetus** obstructing delivery after head and shoulders passed.

W. W. Williams, a case of **Obstruction in Delivery Caused by a Very Large Spina Bifida.**

W. E. Gilliland, a case of **Placenta Previa With Adherent Placenta.**

John A. Koch,
Official Reporter.

The Wabash County Medical Society held the regular meeting July 28th. There was more than the usual interest, indicating that the Society is appreciating the value of the meetings as well as the need of the Society.

The subject for discussion was **Cholera Infantum** and allied affections. R. J. McMurray of Linn opened the discussion presenting in a very graphic manner the clinical history, cause and treatment advocating the early use of supporting and stimulating treatment.

The view of some were against the theory of real cholera in infants, and desisted against the use of alcohol—but recommended normal salt solution and strychnia.

The following were elected as officers for the ensuing year:

W. B. Moon, Belmont, president; G. C. Kingsbury, Mt. Carmel, vice-president; J. B. Maxwell, Mt. Carmel, secretary; S. W. Schneck, Mt. Carmel, treasurer.

The next regular meeting will be held October 27th.

J. Schneck and wife left July 4th for a trip to Europe to be gone four months.

G. C. Kingsbury,
Official Reporter.

Christian County Medical Society.—The regular quarterly meeting of the Christian County Medical Society convened in the city hall at Taylorville yesterday, fifteen physicians being present, representing nearly every town in the county.

No regular set program had been prepared for the occasion, but an experience meeting was held on **Seasonable Diseases.** Dr. Conner was called on by the president to lead the discussion.

The discussion was participated in by Drs. Wright, Hill, Seaton, Armstrong, Reasoner, North, Gibson, Carroll, Johnson, Staples, Hamner, Bridges (Secretary), Nelms (President), Morton, Johns and others. It was thought to be

the most interesting meeting the Society has so far held.

An important matter pertaining to the profession was brought before the Society by Dr. Johns, viz.: **The Relations of the Profession to Corporations and Others in Regard to Malpractice Suits, Etc.** It was finally moved by Dr. North and seconded by Dr. Johnson, that a committee be appointed "to draft a set of resolutions, subject to the approval of the Christian County Medical Society, relative to collecting accounts from corporations and private parties; to protect our members from illegal prosecutions; and further the general interests of our profession in so far as the committee may deem fit." The following committee was appointed. It being thought prudent to have the different towns in the county represented so far as possible: Pana, Dr. Conner; Assumption, Dr. Johnson; Grove City, Dr. Staples; Morrisonville, Dr. Reasoner; Taylorville, Dr. North; Stonington, Dr. Cole. Immediately after the adjournment of the Society, the committee appointed convened and elected Dr. Conner, chairman, and Dr. North, secretary. The committee is to report their recommendations at the next regular meeting of the society.

Clark County Medical Society.—The physician's of Clark County met July 2, at 2:00 p. m., in Marshall and organized the Clark County Medical Society. All actively engaged in the practice of medicine in the county except one or two, had made application for charter membership. Those present were: Drs. Hall, of Westfield; Rowland, Martinsville; Haslet, Clarksville; Ryneason, Walnut Prairie; John Weir, West Union; Ryerson, West York; Bradley, Duncan, Pearce and L. J. Weir of Marshall.

Dr. Edward Pearce was chosen president pro tem and L. J. Weir secretary pro tem. Dr. Joseph Hall was then elected president of the society and L. J. Weir was made secretary and treasurer. Dr. R. H. Bradley was elected vice president.

President appointed as committee to prepare constitution and by-laws and report at next meeting, Drs. Duncan, Rowland and L. J. Weir. This committee made the following suggestions which were duly received and adopted:

1. That the constitution and by-laws be so drafted as to be in full harmony with the principles of organization of the Illinois State Medical Society and American Medical Association.

2. That the society meet at 2:00 p. m. the second Tuesdays in January, April, July and October each year.

3. That membership fee be \$1.00.

4. That the president now appoint a board of censors consisting of three members.

Drs. Pearce, Rowland and John Weir were appointed as the board of censors. All then present paid the membership fee.

Interesting cases were reported by several members present and many important facts and valuable points in the management of cases of smallpox and other diseases were brought out in the discussions of these cases.

About 5 o'clock the society adjourned each man the better qualified to prevent, relieve or

cure diseases by having exchanged ideas with co-workers in the same field.

L. J. Weir,
Official Reporter.

The Jo Daviess County Medical Society held its quarterly meeting in the parlors of the De Sota House, Galena, Ill., July 9, 1903.

The following members were present, Stafford, Miller, Tyrrell, Gunn, Bench, I. C. Smith, Eade, D. G. Smith, Lewis, Bucknam, W. A. Smith, Kreider, Weirich, Grassau, Wright, Staples, Blair, Barber.

The peculiar event of this meeting was that every member on the programme was absent. Nevertheless Dr. Czibulka sent his paper to the Secretary to be read in his absence. Subject, **The Treatment of Some Forms of Pain.** This was a well prepared paper and brought out many interesting discussions, particularly the relief of pain in Lumbago and Sciatica. Many methods were presented from the old time Baumscheidt's, Lebenswecker up to the Static induced current.

Dr. Staples of Dubuque spoke on **Auto Intoxication** and sighted a case.

Dr. Wright of Scales Mound reported a case and asked for advice.

Dr. Staples reported two cases of **Hematuria** following the use of Eurotrophin, and as he was gathering statistics on this subject he asked whether any member had any similar trouble. Dr. Bench reported one case with similar effect.

At the last meeting it was decided to meet regularly at Galena and do away with banquets and each member pay his own expenses. This action was reconsidered and after a vote decided to change the meeting place and the county was divided into four districts and the members of the respective districts entertain the society when convening there.

This method has proved the best, as the social feature of each meeting helped largely to build up and hold together the organization.

An invitation from Stockton, inviting the society to meet there and each bring his wife, daughter or sweetheart along. This was accepted and the society adjourned to meet in October in Stockton.

D. G. Smith,
Official Reporter.

Champaign County Medical Society.—Upon an invitation from the Urbana Physician, the June meeting of the Champaign County Medical Society was held in the Court House at Urbana.

President J. T. Purcell presided. After adopting minutes of the previous meeting a communication from the State Secretary, E. W. Weis, was read, which called for the collection of \$70.50 from this society through its secretary—this being the amount due the State Society at \$1.50 per member (according to constitution and by-laws adopted by State Society at its annual meeting in Chicago).

Payment of this amount was objected to by some on the grounds that state membership was left optional with the members of this Society when it voted in the last February meeting to

become a branch of the State Society. A motion was then made and carried, instructing the Secretary to correspond with the Secretary of the State Society on the question of fees.

A motion was also made and carried, instructing the Secretary to correspond with each member of the Society on the point of State membership and revise the list.

The program of the meeting was opened by Dr. S. S. Salisbury, who read an excellent paper on **The Medical Aspect of Malignant Diseases**, discussed by Drs. Howard, Gray, Brayshaw and others.

Dr. Purcell's paper discussed the subject of **Immunity as Influenced by Environment.** The author believed that natures laboratory furnishes the antitoxins that renders individuals and races immune to certain diseases.

An interesting discussion was led by Dr. Johnson, followed by Drs. Martin, Burres, Matheny, Salisbury, Mandeville, Bartholow and others.

The following applications for membership in the society was read and referred to board of censors: W. H. Zorger, Joseph Brayshaw, W. W. Monsell, C. J. Cooper, Rachel Cooper and F. C. Renfrew.

Jas. S. Mason,
Official Reporter.

The Sangamon County Society held its regular monthly meeting July 13, in the supervisor's room at the Court House at 8:30 o'clock, with A. L. Brittin, president, in the chair and thirteen members present.

The minutes of the June meeting were read and approved. The letter from E. W. Weis, Secretary of the State Society, asking for \$102 from our society was read and the Secretary-Treasurer instructed to notify delinquent members and collect dues. The secretary was instructed to cast the ballot for Harley Strol and James L. Lowery after which they were declared elected. The bills amounting to \$3.50 were ordered paid.

The literary exercises consisted of paper on **Rupture of the Uterus in Confinement** by S. R. Hopkins, a synopsis of which follows:

The number of these cases is about one to four thousand births, and the mortality is from 65 to 95 per cent. Rupture of the uterus is caused by an obstruction to the passage of the head or as the result of defective resistance of the uterine wall, being produced by fatty, tubercular, carcinomatous and cicatricial degeneration. It usually occurs in multiparae and has been known to follow the administration of ergot in the first stage, the rupture occurs in that part of the uterus between the ring of Bandle and external os and in the front with sudden stopping of pains and profound shock.

After rupture has occurred and the child is in the peritoneal cavity, laparotomy should be done, remove child, clots, and fluid and as the conditions demand either suture the tear or remove the uterus. If the child is not entirely in the peritoneal cavity use forceps delivery and pack the rent with iodoform gauze. The writer does not think much of the latter method, he reports two cases, one terminating in death a

half hour after rupture, the other died 20 hours after operation and eight days after rupture.

In this discussion J. N. Dixon complimented the paper and reported a case where child was born dead, in the next 24 hours patient had chill and fever whereupon careful examination revealed a tear extending upward from the cervix for a finger length, there had been no hemorrhage or shock but patient died of sepsis.

H. B. Buck reported a case of instrumental delivery which he thought was a rupture of uterus, using prophylactic measures with recovery. R. D. Berry thought chloroform would prevent rupture by relaxing the circular fibers in the womb. The society adjourned till the second Monday in September.

Percy Louis Taylor,
Official Reporter.

The Brainard District Medical Society held its regular quarterly meeting in the supervisor's rooms of the Sangamon County Court House, Springfield, July 23, 1903. President A. M. Sargent of Lincoln in the chair.

Members present were: Carl E. Black, F. P. Norbury, J. W. Hairgrove of Jacksonville; E. E. Hagler, S. E. Munson, A. E. Prince, L. C. Taylor of Springfield; A. M. Sargent, C. C. Montgomery, H. S. Oyler of Lincoln; Maskel Lee of Atlanta; W. H. Kirby of Chestnut; W. A. Mudd of Athens and J. W. Newcomer of Petersburg. Visitors: J. W. Dickson, C. E. Nelson, A. J. Baldwin of Springfield and T. A. McTagget of Pawnee.

Applications were received from D. S. Gailey of Ashland; T. F. Hill of Athens; C. R. Spencer of Springfield; J. H. Butler of Hartsburg; G. G. Taylor and L. F. Curtis of Elkhart. All being acted upon favorably by the Board of Censors were admitted into full membership.

Committee on Tuberculosis appointed as follows: A. M. Sargent, of Lincoln; J. L. Lowrie, of Lincoln; A. G. Servoss of Havana; J. W. Newcomer, of Petersburg and A. L. Brittin of Athens.

Carl E. Black of Jacksonville gave an interesting article on organization. He advised the organization of the remaining counties in the district, namely: Logan, Mason and Menard. He gave a description of the districts of the State and said he favored the district societies taking the name of the old district societies now in existence.

Maskel Lee of Atlanta then moved that a committee of three be appointed to cooperate with the councillor for this district and organize County Societies in the counties of Logan, Mason and Menard. Seconded by W. H. Kirby, of Chestnut. Carried without a dissenting vote.

The committee appointed was J. L. Lowrie, of Lincoln, S. E. Munson, of Springfield, and W. A. Mudd, of Athens.

S. E. Munson, of Springfield, presented a paper on **Puerperium Complicated by Malarial Infection.**

He gave a report of two cases giving the history of symptoms and differential diagnosis. The principle methods being the microscopical examination of the blood and the disappearance of all symptoms by the administration of Quinine.

Maskel Lee of Atlanta presented a paper on **Human Asymmetry.** He showed that form and development in both animal and vegetable life was not symmetrical. In animals for instance a man will have his best eye or best ear; that there is always a difference in the size and shape of the right and left feet; hands, ears, etc. That in the internal organs there is a difference between the two kidneys, testicles, lungs, and the brain and that nowhere in nature do we find perfect symmetry.

E. E. Hagler of Springfield, presented a paper on **Adenoids.**

He favored the term **admonds** instead of adenoid vegetation. That they are simply an hypertrophy of Luschka's tonsil. Gave the symptoms of greatest diagnostic importance. That complete and radical removal with sharp Gottsteins Curette was the only rational treatment. Advised their early removal as chronic rhinitis and middle ear complication may be the direct result of their presence.

F. P. Norbury of Jacksonville, reported a very interesting case of **Metastatic Carcinoma.**

The Society adjourned to meet at Havana October 22, 1903.

H. S. Oyler,
Official Reporter.

FINSEN LIGHT INSTITUTE.

Drs. H. J. and W. T. Stewart have opened an institute in Chicago for the treatment of disease by apparatus as designed by Finsen, Oudin d'Arsonval and others.

These gentlemen have made a thorough study of this subject in this country as well as Copenhagen and London, and have equipment that cannot be equalled in America.

They have secured elaborate quarters at 78, 80 and 82 State street, where they will undoubtedly meet with great success.

Marriages, Deaths and Changes of Address.

Marriages.

- Henry P. Beirne, Quincy, Ill., to Miss Hildred Marie Jones, Milwaukee, Wis., June 23.
- Thomas Boyd Morris, Atlantic, Iowa to Miss Ester McLean, Joliet, Ill., May 1.
- Aram Brown to Miss Florence Foley, both of Chicago, June 10.
- Joseph Damiani to Miss Josephine Samuelson, both of Chicago, June 30.
- Henry L. Downing, Los Angeles, Cal., to Miss Elsie Clarke, Springfield, Ill., June 23.
- Green Ewing Hill, Glrard, Ill., to Miss Hattie N. Miner, of McVey, Ill., June 16.
- I. J. Franklin to Miss Becky Salk, both of Chicago, June 9.
- Benjamin Gleeson, Danville, Ill., to Miss Kathryn May White of Chicago, June 17.
- John W. Hairgrove, Jacksonville, Ill., to Miss Mabel Marvin, of Madison, Wis., June 20.
- Arthur C. Johnson to Miss May Dean, of Monmouth, Ill., June 15.
- George T. Meacham, to Miss Carrie Reed, both of Taylorville, Ill., at Vandalia, Ill., June 9.

Paul F. Morf to Miss Louise E. Paulus, both of Chicago, June 9.

S. Leo Oren, Lewistown, Ill., to Miss Helen A. Wise, of Davis, Ill., June 10.

Harry V. Prescott, Dallas City, Ill., to Miss Lucreita Quinton, of Denmark, Iowa, June 14.

R. A. Noble, Northwestern University Medical School, Chicago, 1901, of Bloomington, Ill., to Miss Eleanor Goodman at Los Angeles, Calif., May 14, 1903. After visiting Santa Barbara, Monterey, San Francisco and Yosemite Valley, Mr. and Mrs. Noble returned via Denver and Kansas City during the height of the flood. They will be at home at Bloomington, Ill., after August 1st.

Deaths.

David B. Fonda, M. D., Bennett College of Eclectic Medicine and Surgery, Chicago, 1878, for four years county physician of Cook county, Ill., died at his home in Jefferson Park, a suburb of Chicago, June 20, aged 68.

David Ellis, M. D., University of Louisville, (Ky.), 1852, of Augusta, Ill., was run over by a passenger train and killed, at Augusta, July 5, aged 80.

V. H. Harter, M. D., Northwestern University Medical School, 1902, of Stronghurst, Ill., died at the Cottage Hospital, Galesburg, from appendicitis, June 25, after an illness of one week.

Nelson H. Henderson, M. D., College of Physicians and Surgeons, Chicago, 1886. Member of American Medical Association, died at Lakeside Hospital, Chicago, June 23, from septicaemia, following an infection received while operating May 13, aged 45.

Robert F. Henry, M. D., Rush Medical College, Chicago, 1853, died at his home in Princeton, Ill., July 1, from apoplexy, aged 80.

D. H. Herrell, M. D., 1878, died at his home in Hanna City, Ill., June 22, aged about 60.

Joseph H. Hilton, M. D., Miami Medical College, Cincinnati, 1874, died at his home in Maywood, Ill., May 27, from heart disease, aged 67.

Asa V. Hutchins, M. D., Hahnemann Medical College, Chicago, 1883, died at his home in Chicago, July 6, from injuries received in a fall a week previous, aged 59.

George N. Jennings, M. D., Rush Medical College, Chicago, 1864, formerly of Tonca, Ill., died suddenly from heart disease at Covina, Cal., June 1, aged 65.

Hiram K. Jones, M. D., Medical Department of Illinois College, Jacksonville, Ill., 1846, a retired physician of Jacksonville, died at his home June 16, aged 82.

Charles Legg, M. D., formerly of Stringtown, German township, Richland County, Ill., died at the Illinois Southern Hospital for the Insane, Anna, June 14, after a long illness, aged 78.

Hans H. Littlefield, M. D., 1887, for many years a member of the American Medical Association, died at his home in Beardstown, Ill., June 26, aged 79 years. He served two years as a surgeon of volunteers during the Civil war.

Isaac Newton Love, M. D., born in Barry, Ill.

Arthur E. McBride, M. D., Louisville Medical College, 1883, died at his home in Sterling, Ill., June 12, from tuberculosis, after an illness of two years, aged 42. He was a member of

the Illinois State Medical Society, The North Central Illinois Medical Society, and was retiring president of Whiteside County Medical Society.

E. B. Roberts, M. D., died at his home in Mount Erie, Ill., May 11.

Dr. Milan Sachs of Vienna, engaged in bacteriologic work at Institute for Infectious Diseases, Berlin, died from plague in an isolation hut at Berlin, June 6.

Edgar M. Smith, M. D., Rush Medical College, Chicago, 1891, a member of the American Medical Association, died at his home in Chicago, May 11, aged 40.

Adelbert H. Taggart, a prominent physician of the West Side, president of the Kedzie Hospital and prominently associated with a number of benevolent organizations, died May 27th of pneumonia, at the age of 57. He was born in Vermont and had resided in Chicago since 1873.

Gilbert R. Woolsey, M. D., Hahnemann Medical College, Chicago, 1868, of Normal, Ill., died at Cambridge, Ill., June 7.

CHANGES OF ADDRESS.

Changes in Chicago.

Ballenger, Wm. L., 100 State st., to 103 State st. Brophy, T. W., 126 State st., to 31 Washington st.

Bennet, E. R., 1107 Montana st., to 1320 Lawrence ave.

Bates, M. D., 31 Washington st., to Jackson Blvd. and Halstead st.

Campbell, T. F., 103 State st., to 3519 Indiana ave.

Carpenter, Geo. T., 103 State st., to Trude Bldg.

Coonley, P. H., 1496 West Madison st., to 1593 Milwaukee ave.

Friedrich, Louis H., 109 Randolph st., to 626 LaSalle ave.

Goldnamer, W. W., 103 State st., to 315 Royal Insurance Bldg.

Gowen, Guy A., 2604 Wallace st., to 420 26th st. Gray, Philip M., 1659 Lincoln ave., to 2267 N. Paulina st.

Herrick, James B., 751 Warren ave., to 200 Ashland Blvd.

Jaques, W. K., 103 State st., to 4316 Greenwood ave.

Johnson C. W., 101 Chicago ave., to 1612 Belmont ave.

Lemke, A. E., 400 Reliance Bldg., to 3642 Forest ave.

Morrill, E. Frank., to 700 120th st.

Mackenzie, Wilbur, 100 State st., to 616 Fullerton ave.

Neiwanger, C. S., Champlain Bldg., to 31 Washington st.

Naughton, M. T., 100 State st., to

Neff, J. M., 3033 Indiana ave., to 4600 Michigan ave.

Neeley, J. R., 1325 Sheffield ave., to 1455 Edgecobb Place.

O'Malley, T. F., 389 N. 13th st., to 220 Blue Island ave.

Ridlon, John, 103 State st., to 92 State st.

Sweet, Albert A., 1465 Armitage ave., to 755 Lunt ave.

Stillians, D. G., 103 State st., to 230 W. Chicago ave.

Suker, Geo. F., 100 State st., to 103 State st.
Sandberg, Karl F. M., 622 N. Hoyne ave., to 684 N. California ave.

Spring, C. K., 1451 Dakin st., to 2378 N. 42d st.
White, Mary B., 1406 103 State st., to 1406 100 State st.

Waterhouse, C. F., 103 State st., to 42d st. and Lake ave.

Walling, Willoughby, 103 State st., to 4127 Drexel Blvd.

Yarros, R. S., 290 LaSalle ave., to 5811 Madison ave.

Changes from Chicago.

Galliver, Lillian E. C., 1256 Perry st. to Bagdad, Fla.

Lesage, Chas. A. E., 3360 State st. to Dixon, Ill.

Rumpf, W. H., 100 State st. to Faribault, Minn.
Starkweather, Ralph E., 108 Dearborn st. to 1223 Grove st., Evanston.

Changes in Illinois.

Brunk, Thos. L., from Dixon to Aurora.

Kearney, Joseph M., from Dunning to Elgin.

Oren, S. A., from Lanark to Lewiston.

Polock, Arthur D., from Macomb to Rushville.

Roe, J. B., from Rochelle to Oregon.

Utley, J. W., from Springfield to Thayer.

Changes from Illinois.

Buxton, E. F., from Oak Park to Tucson, Ariz.

Crain, L. F., from Pana to Deep River, Iowa.

Shreck, John A., from Cameron to Redlands, California.

THE MILWAUKEE SANITARIUM

WAUWATOSA, WIS.

FOR NERVOUS AND MENTAL DISEASES.

Wauwatosa is a suburb of Milwaukee on the Chicago, Milwaukee and St. Paul Railway, 2½ hours from Chicago, 5 minutes' walk from all cars and trains.

Physician in charge: RICHARD DEWEY, A. M., M. D.

CHICAGO OFFICE, 34 Washington St., Wednesday 11:30 to 2 o'clock (except in July and August). Telephone connections, Chicago and Milwaukee.



MICA PLATES

HIGH SPEED FOR VOLUME & HIGH TENSION.
BEST FOR XRAY & THERAPEUTICAL WORK.

½ SECOND EXPOSURE, 1500 REV. PER MINUTE



½ SECOND EXPOSURE, 500 REV. PER MINUTE



R. Y. WAGNER & CO. CHICAGO.

PHOTOGRAPHS OF DISCHARGE FROM OUR 4 PLATE MACHINE

FANSHAWE HANDDECKER STORM APRON.

[PATENT]

DO YOU DRIVE DOCTOR? IF SO, HAVE

NO MORE INKY, SLIPPERY REINS.

NO MORE COLDS FROM WET GLOVES AND HANDS.

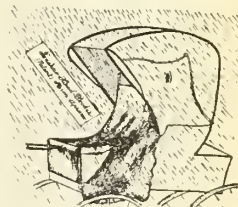
ENTIRE BODY. LEGS, ARMS AND REINS PROTECTED.

BIG COVERED DRIVING HOLE

gives absolute control of horse from either side or middle of buggy or surrey. One testimonial says "Would not be without at ten times the cost."

SAVES ITS COST in gloves in one week and lasts for years.

Made of the best rubber sheeting. PRICE \$7.50. In ordering give



- (1) Width of Dash— inches.
- (2) Height of Dash— inches.
- (3) From bottom of dash to hooks in hood— inches
- (4) Width inside hood between hooks— inches
- (5) Style of buggy or surrey.

FANSHAWE HANDDECKER APRON COMPANY,
299 NORTH STATE ST.CHICAGO, ILL.

THE CINCINNATI SANITARIUM

A Private Hospital for Mental and Nervous Disorders, Opium Habit, Inebriety, Etc.

TWENTY-NINE years' successful operation. Thoroughly rebuilt, remodeled, enlarged and refurnished. Proprietary interests strictly non-professional. One hundred and fifty patients admitted annually. Detached apartments for nervous invalids, opium habit, inebriety, etc. Location retired and salubrious. Grounds extensive. Surroundings delightful. Appliances complete. Charges reasonable. Electric cars from Fountain Square, Cincinnati to Sanitarium entrance. Long Distance Telephone 735W.



FOR
PARTICULARS
ADDRESS

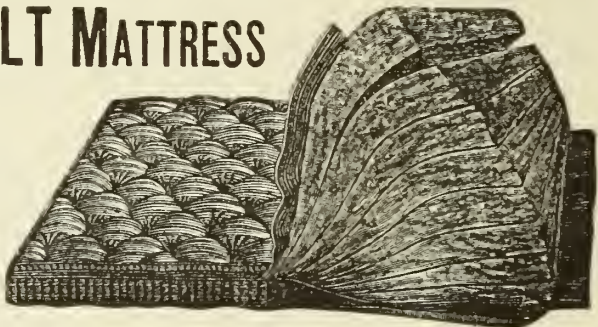
ORPHEUS EUERTS, M. D., Supt., College Hill Station, Cincinnati, Ohio.

ELASTIC COTTON FELT MATTRESS

MANUFACTURED BY

The Springfield Mattress Co.

Indorsed by leading Physicians as the most practical and satisfactory Mattress for hospital use. Ask your furniture dealer for them or write direct to us.



THE SPRINGFIELD MATTRESS CO., SPRINGFIELD, ILL.

MEDICAL STENOGRAPHER

LILLIAN M. BOYNTON.

Prepared to give special attention to all forms of Medical Stenography, embracing editing and typewriting of manuscripts, correspondence, copying, etc.

Lowest Prices, either by hour, day, or at irregular times.

TELEPHONE, GRAY 655 ————— 3540 CALUMET AVENUE. CHICAGO

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL.

Chartered by the University of the State of New York.

THE OLDEST POST GRADUATE SCHOOL IN AMERICA. Organized in 1881—Opened in 1882

For particulars write to DR. W. R. TOWNSEND, SECRETARY, 214 EAST 34th STREET, NEW YORK.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 4. }

Springfield, Ill., September, 1903.

{ SUBSCRIPTION
{ \$3.00 A YEAR.

THE GENERAL PRACTITIONER AND HIS RELATION TO EARLY SUR- GICAL OPERATIONS.*

BY E. B. MONTGOMERY, M. D., QUINCY.

In these days of ever-increasing specialism, it is not to be expected that the general practitioner or internist should be perfectly informed as to the refinements and minute developments in each special branch of practice. There are many points, however, in which he comes into close touch with them all, and in which his judgment may be of the highest importance to the welfare of the patient. There are so many patients applying to the internist at first for relief, who require at an early period, expert surgical intervention, that it has seemed to me that the subject of the relation of the general practitioner to early surgical operations, is well worthy of a brief consideration by this section. I will premise all I have to say by the remark that all the surgical work referred to is supposed to be in thoroughly competent hands. It is always too early for unskilled or incompetent persons to undertake work requiring the highest technical skill, knowledge or experience, and such operations in such hands serve only to bring disaster to the patient and opprobrium upon surgery. Fools should not be allowed to rush in where "angels fear to tread," whatever may be their license or motives for so doing. But all of this, while an intensely practical matter, indeed a matter having to do deeply with medical education and medical ethics, has nothing to do with the scientific aspect of the subject under consideration. It is constantly impressed upon us by everyday experience, that a very large number of cases are rendered hopeless or fail to be benefited as much as might be, by failure to secure surgical interference at an early period. Valuable time is often frittered away by futile attempts to apply internal remedies to conditions requiring

early treatment by the surgeon, in order to secure favorable results. Here, the general practitioner is often the arbiter of the fate of the patient, for it is to him that such patients first apply for relief and it is only through his advice and aid that surgical aid is likely to be had. A few of the instances in which it should be his duty to promote the procuring of such early aid, it will be of interest and importance to consider.

The first condition to be considered in which a surgeon should be called early is that of appendicitis, or cases in which a diagnosis of appendicitis is probable. In my mind it is beyond question that appendicitis has been proven both clinically and pathologically to be essentially a surgical disease, and that it is dealt with by surgical methods with better results, both immediate and remote, than by purely medical management. This being the case, it is certainly unjust to the patient and to the surgeon to delay associating him in the treatment, to a time which might not be best or most desirable for operation. An early diagnosis and early operation, I believe is supported by the consensus of opinion of those having the widest experience in the treatment of this disease. An early diagnosis is usually not difficult. A localized peritonitis in the right iliac region in males and children is in the vast majority of cases of appendiceal origin. In women, the differentiation from a cause originating in the female pelvic organs, is usually not hard to make by the usual methods of examination of those parts. The futility of medical treatment in a large number of cases is shown by the disastrous termination of many of them apparently of mild type. There may be at first severe pain soon becoming bearable, a temperature not exceeding 101.5 F. and pulse 100, there may be no inflammatory mass and everything may point to an early recovery, when on the 3d or 4th day a perforation may occur from gangrenous appendix and the patient soon collapses from septic peritonitis.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

As Nothnagel has well said, unless one operates early by principle in every case, such results cannot be avoided occasionally. The rule laid down by Hemmeter¹ in his work on "Diseases of the Intestines" should therefore be followed wherever possible. He says, "Let the practitioner associate an experienced surgeon with himself in every case of appendicitis, even the simplest and mildest." In intestinal occlusion the same rule holds, so that no valuable time should be lost in attempting a cure by purely medical methods. Favorable results are much more likely to follow early than late operations. According to statistics compiled by Naunyn of the results of 288 cases of intestinal occlusion treated by surgical intervention, when the operation took place during the first 48 hours the recoveries were 75%. After the third day the results grew less favorable, sinking to 35%.

Nothnagel, Boas and Naunyn all agree that when the character of the occlusion can be well made out, medical treatment should not be continued longer than 48 hours. Hemmeter thinks that "the obscure cases running an intensely acute and rapid course, should be *operated on at once*. These cases usually being so very fatal without operation every life saved in this manner is a gain and a gift, pure and simple."

Acute Cholecystitis not rapidly subsiding is another condition in which surgical advice and frequently early surgical operation is indicated. Kehr² whose experience in the surgery of Cholelithiasis has been greater than that of any living surgeon, emphasizes the importance of operation before the pathological changes in the gallbladder have not too far advanced, and while the gallstones are still in the gallbladder, not having moved into the deeper ducts. He says "the slight dangers of early operation stand in no sort of a relation with the great dangers of the disease itself. This conviction ought more and more to gain strength, and not only in medical circles but even in the lay public to gain a firm footing. It is very lamentable that the scientific practitioner has scarcely any opportunity of influencing the wider circles of the people, for just as soon as he opens his

mouth in any sort of a society not a medical one, he is exposed—often, indeed with reason—to the charge of advertising. The natural doctor and the empiric, however, scatter the poison of their teaching ever further, and we are obliged to connive at stupidity and folly gaining always more and more."

The cases which may be safely left to the internist are cases with acute obstruction of the common duct proceeding normally, and those with frequent colics each time attended with the passage of stones. But in cases of sero-purulent cholecystitis and pericholecystitis with adhesions, and cases with chronic obstruction of the common or cystic ducts should certainly be cases for skilled surgical interference as early as possible. According to Kehr's experience, the mortality of these operations is less than 1%, while not over 90% of the cases show even an apparent cure under medical treatment.

In perforation of a typhoid ulcer in the course of a typhoid fever, the only hope of saving the life of the patient lies in the earliest possible operation. After the shock of the perforation is over, every hour the infection of the peritoneum becomes more intense, and as Keen says "if the operation is not done within about 24 hours after its occurrence there is practically no hope of recovery." Early diagnosis and prompt operation is the keynote to any success here. As Dr. J. B. Murphy³ of Chicago has recently said, in his report of a case of typhoid perforation operated on by him last November with favorable result. "In the past the diagnosis of perforation was based on the combination of symptoms included under the term collapse, which was believed to occur a few hours after the perforation took place. At present the diagnosis of acute infectious perforative peritonitis is based upon the symptoms of pain, nausea, and vomiting, localized tenderness, circumscribed flatness on piano percussion, and hyperleucocytosis, in the order named."

An operation should not be postponed until collapse symptoms appear. In a contribution of "Surgical features of Typhoid Fever" in the last volume of Johns Hopkins Hospital Reports,⁴ the authors, McCrae and Mitchell say that it is the practice in that hospital to

have a surgeon see all cases of typhoid fever presenting any abdominal features, following a suggestion previously made by Osler that the earliest symptoms of perforative cases should be studied and watched by the surgical colleague as well as the physician. Out of 7 cases so studied and operated on in the hospital within the last two years, two have recovered. In one of the cases with favorable result, the operation was made within 7 hours after the first appearance of localized abdominal pain, and rigidity, but before the appearance of any marked distension. In the second favorable case, the operation was made 12 hours after the first appearance of abdominal pain and rigidity, and about 4 hours after distension first appeared.

Cases presenting indications of extrauterine pregnancy should have surgical advice, and often surgical operation at a very early period, and as these cases, as well as the other types previously considered, first come into the hands of general practitioner, upon his judgment frequently depends the fate of the patient. Whenever a woman having passed one or more menstrual periods, and supposed to be pregnant is suddenly seized with severe pain in the lower abdomen, feels faint and develops symptoms of shock, as pallor, feeble pulse, clammy sweat, cold extremities, etc., it is probable that she is suffering from hemorrhage from rupture of the extra-uterine gestation sac. It goes without saying that a competent surgeon cannot see her too soon, and neither expectancy nor stimulating medication relied on. These are cases where early or immediate operations are frequently lifesaving.

Early operative interference is indicated in septic infection of the uterine appendages. In an address on this subject, Henrotin⁵ well contrasts the two courses which may be pursued. The method of delay, in which he says you "see your patient regularly, hypnotize her to the best of your ability, amuse her with poultices and hot douches, give her Quinine as an antipyretic if her temperature goes up, or Quinine as a tonic if it goes down, and tell her to have patience, and if she does not recover, when her tubes and ovaries are ready and ripe, yourself or one of your friends will remove them."

Or as early as you find an exudative mass against the uterus, and the organ fixed, incise the posterior vaginal fornix and drain the affected seat of the trouble.

While not necessary to the saving of life, the general practitioner should advise more often and more decidedly than he does, the early operation for the radical cure of hernia. When the almost entire absence of mortality of the operation in competent hands is considered, and the result in removing completely what is otherwise a most distressing disability, the only wonder is that it is not advised as a matter of routine, in all patients capable of tolerating any surgical interference, between the ages of 5 and 60 years.

This has been my invariable practice for several years, and the results have been uniformly gratifying. Three years ago the late lamented Prof. Christian Fenger performed the Bassini operation for me, for the cure of a hernia acquired by me one week previous, and the result has been a permanent cure. The percentage of recurrences in operations properly done is extremely small. I know of no surgical procedure giving more satisfactory results, and its early performance should be much more common.

Accumulations of fluid in the pleural cavity should be removed promptly by aspiration under aseptic precautions, and such patients not subjected to the prolonged disability produced by waiting for results from internal medication. Delafield⁶ in a recent article on "The Treatment of Pleurisy with Effusion," details 200 cases treated in his service in Roosevelt Hospital from 1886 to 1901, all of which were aspirated. There was infection in no case and the patient usually made complete recovery within two weeks. In private practice his results have been still better, a number of them being entirely well within a week, and none of them sick longer than two weeks. With such results as these by aspiration, how unnecessary seem the long delays incident to courses of medical treatment, and reserving aspiration as a last resort for effusions which seem to menace life. The experience of Dr. E. Fletcher Ingals⁷ is that where aspiration is done early in empyema, we may expect from 95 to 98% of recoveries. Early aspiration is to be advocated in eff

sions of any size into the pericardium. I have seen more than one patient die where this was refused, that I am confident might have been saved by its timely performance.

Carcinoma affecting certain portions of the body is only amenable to early operation following early diagnosis, this being particularly true of the mammary gland, the uterus and the rectum. The recurrences which follow later operations are disheartening to the surgeon, and only tend to lessen the confidence of the people in surgical art. In his monograph on "Diseases of the Breast" Bryant says that the only hope of cure lies in early diagnosis and radical removal. "Waiting till symptoms develop" means waiting till all hope of cure is gone, he thinks, and Senn⁹ in his classical work on "Tumors" says: "The writer is confident that when the public has become educated in reference to the necessity of early operations, and the profession recognizes the importance of carrying the incision far beyond the palpable tumor and the infected glands, the percentage of permanent recoveries will be increased greatly." In this view all surgeons heartily concur, and the duty of the general practitioner is most plain. As the adviser of his clientele on matters pertaining to their health, he should make known to them the importance of seeking professional advice at once in any abnormality or induration occurring in the mammary gland in women above 40 years of age. The importance of this can be still more fully realized when we consider that 85% of all growths appearing here, are malignant in character. Only through this means of educating the public will these cases be brought to the attention of the surgeon when his aid will be most effective.

Rectal troubles causing obstipation should very early be subjected to a thorough rectal examination. If this were done habitually very few cases of carcinoma of the rectum would be permitted to go to the inoperable stage. As it is most of the cases when referred to the specialist have passed beyond the period when surgical operation would be justifiable. Hennmeter¹ says that 90% of the cases of malignant disease that have come under his observation, have brought the

ready-made diagnosis of bleeding piles or fistula.

In carcinoma of the uterus the same complaint is to be made. Hitherto, statistics relating to ultimate recovery have been most discouraging. At the Ninth German Congress of Gynaecology May 29-31, 1900, Prof. Freund said he was only able to report two cases of cancer of the uterus permanently cured by surgical operation in 23 years experience. He learned by inquiry in the various clinics of Germany that after abdominal extirpation with removal of the larger portion of the parametrium and glands that the mortality is 24.5%, and recurrences within the first year 46.6%. Baldy¹⁰ in a paper read before the Gynaecological section of the American Medical Association in June, 1901, expresses the view that the results achieved by surgery in this disease are "Surgery's Disgrace." He estimates that the number of permanent cures following operation is less than 5%. These bad results he attributes to lack of proper attempt to discover these cases early, and disinclination to advise immediate operation when they are discovered, under the misapprehension that a later operation saves a large percentage of cases. He says that when the family practitioner realizes that early operation gives the only hope of cure, he will watch his female clientele more closely with this end in view. Hemorrhage, with possibly beginning loss of flesh and strength is, he thinks, the diagnostic sheet anchor in the early stages. Bleeding begins very early, early enough to give warning of what is coming. A woman who has passed menopause and a year or two or possibly several years later has a show of blood from the genitalia, almost invariably has uterine cancer. He would be suspicious of any hemorrhages occurring without reasonable cause. These at any time, may be significant, and call for careful examination. The symptoms may be explained by polyp, erosion, or a benign ulceration, but most frequently will cancer be found so early that the pathologist will be uncertain in his diagnosis. The earliest possible operation is the only way of making a better showing in our number of cures, and

for this opportunity the surgeon must depend on the wisdom of the family practitioner in making an early diagnosis and advising immediate operation.

Dr. G. Frank Lydston¹¹ has recently called attention to the fact that the profession at large should be impressed with certain facts in regard to prostatic enlargement. He calls attention to the fact that while the use of the catheter may for the time relieve the symptoms of prostatic obstruction, that the longevity of patients after the habitual use of the catheter has been once begun, is, on the average, about 5 years, and those 5 years, years of suffering. It is obvious therefore, that when the enlargement and obstruction have reached this degree, that the case must be referred to the genito-urinary surgeon. An early operation performed before the onset of bladder and renal complications, gives a favorable prognosis, and should always be advised at this time. The operation done at a later period, as I know from observation of several cases in which prostatectomy has been done as a last resort, after the obstruction had become so great that a catheter could no longer be used and the bladder and kidneys had become infected, is not satisfactory, and the results are only palliative.

A considerable number of conditions in which delayed operations are undesirable might be mentioned, but I will close with a few in which the family practitioner is the determining factor in bringing about early relief. One is the early removal of postnasal adenoid growths, in which delay is, in most instances, fraught with evil consequences, not only on the general health, mental development, and facial formation, but also from the danger of ear complications arising, and the greater seriousness of infectious diseases, such as Scarlatina and Diphtheria in such subjects. Another condition in which timely interference is desirable, is in acute purulent collection in the middle ear, in which an early incision of the tympanic membrane may prevent the extension of the disease to the labyrinth or meningitis.

This list might be almost indefinitely extended, but enough has been said to show at how many points the general practitioner comes into contact with the surgeon and specialist, and to demonstrate the importance of his having carefully considered opinions regarding the pathology and treatment of many affections which very early demand operative care.

Bibliography.

1. "Diseases of the Intestines," vol. 2 Hem-meter.
2. "Gallstone Disease," Hans Kehr.
3. Journal American Medical Association, April 11, 1903.
4. Johns Hopkins Hospital Reports, Vol. 10, p. 385.
5. "The Cure of Septic Pelvic Diseases in Women," F. Henrotin, American Gynaecological and Obstetrical Journal, June, 1896.
6. American Journal of the Medical Sciences, December, 1902.
7. "Prognosis and Treatment of Suppurative Pleurisy," E. F. Ingals, Illinois Medical Journal, 1902.
8. "Diseases of the Breast," by Thomas Bryant.
9. "Pathology and Treatment of Tumors," by N. Senn, M. D., Ph. D., LL. D.
10. American Medicine, Vol. 2, p. 169.
11. Illinois Medical Journal, March, 1903.

Discussion.

Edward H. Ochsner, Chicago: Mr. Chairman.—The field covered by this excellent paper is such a large one that it is impossible to cover the different phases of the subject in a brief discussion. The directions given by the essayist are worthy of serious consideration, and I believe most of them can be followed safely. It is certainly very important for the public in general that the general practitioner realize the gravity of all of the conditions that have been mentioned, and the absolute necessity of having them attended to from the first. The essayist has brought forth statistics showing how hopeless many of the conditions are, when the patients are seen late, and how much more favorable the outcome would be if the general practitioner either attempted to relieve the condition immediately, or sent the patient to whomever he saw fit, if he did not feel competent to do the operation himself. There are a great many things in surgery that the general practitioner should know how to do. The question of intestinal obstruction, for instance, or strangulated hernia, which amounts to the same thing in most instances is one with which the general practitioner should be familiar, because very often, by the time a surgeon can be called, the patient is beyond hope.

THE RESPONSIBILITY OF THE SURGEON.*

BY J. E. COLEMAN, M. D., CANTON.

That he is responsible for the life, health and happiness of the patient under his care, should never for an instant be forgotten by the surgeon. Fothergill has said that, "There is a murder stage in every young physician's experience," and during that time he is learning how to handle dangerous tools. May it not be true of the surgeon as well?

Legally, the surgeon may operate so soon as he graduates and obtains his license, but is he qualified? Or, will he ever be qualified to operate? This is a question which each individual member of the profession must answer for himself.

Surgery is the one science which demands a perfect mentality, as well as physical skill on the part of the operator. It requires sound judgment which takes into consideration all the intricacies of the case. It requires also perfect honesty of purpose and a firm resolve to do that which is best for the good of the patient. The conscientious surgeon will be very careful in taking the responsibility of a surgical operation. Personal ambition will remain in the background with him. But can he afford not to operate? He can and should unless he is positive that he has the proper knowledge of the case and the necessary skill to apply that knowledge. Until that time comes he should take instruction from Past-masters in the art, and he should operate only on the Cadavers.

Surgery is the grandest blessing, or the greatest curse to humanity, according to the skill of the operator. Every important operation should be done over and over again on the cadaver, until the operator is thoroughly skilled before he attempts it on the living subject. The experience of your writer is that every physician, sooner or later develops an ambition to do surgery. If he lives in the country without Hospital facilities, he is very much handicapped. Often attempts are made to do work without a sufficient number of proper instruments. Often the nurse, a

most necessary accompaniment to surgery, is dispensed with. All sorts of chances are taken, to the detriment of the patient, simply because the embryo surgeon has an ambition to operate.

It is not right to advance personal interests at the expense of the sick and suffering, and we should protest against it being done. Worst of all is the attempt to do surgery without the necessary knowledge. I have seen a patient die on the operating table with the unskilled operator admitting his ignorance and inability, after it was too late. I have no objection to the operator making a legitimate beginning, but with the cities and hospitals full of marvelously skilled surgeons the embryo operators have no right to jeopardize the lives of patients. Only after accurate diagnosis; after careful preparation of the patient; after conscientious, painstaking preparation of the surgeon himself both mentally and physically, and with due regard to the detail of technique, then he should skillfully operate. Every year the art of surgery is growing and broadening. Men of genius are constantly inventing new instruments, developing plans and methods and enlarging our resources. The domain of health is growing greater and greater—the realm of sickness smaller and smaller because these surgical giants are in our midst. Let us give them praise for taking these great responsibilities and bow to them in our hour of need. Let us remember that not all of us can be great in all things, and that a sense of our own honesty is better for us than flattery and adulation, and the expression: "He has done what he could," is the highest encomium.

TONSILAR HEMORRHAGE.*

BY LAWRENCE R. RYAN, M. S., M. D., GALESBURG.

It is an old saying that the unexpected always happens. This is just as true in the practice of medicine as in any other profession or business. The man who has never had a case of postpartum hemorrhage in ten years of obstetrical practice is apt to assume that it never occurs, and that his old pro-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

*Read at 53d Annual Meeting, Chicago, May 30, 1903

fessor was absolutely wrong in dwelling so much upon it. The same might be said of lacerations of the perineum. They come when least expected. I was one of a class of ten in college to whom the professor was giving a demonstration in actual labor as to the best means of preventing laceration. But even as he was telling us an unusually severe pain came on and the perineum was lacerated clear through to the rectum. In fifteen years of special practice I have never had or seen a case of sympathetic ophthalmitis. I have often doubted the existence of such a condition. I am afraid, however, that some day I shall be brought up short with a severe case, and my doubts will go with the wind.

The same might be said of tonsillar hemorrhage following amputation. During half a decade or more of practice in the special work of ear, nose and throat; and after the removal of a great number of tonsils I had never seen a case of severe or alarming hemorrhage. I, like hundreds in the profession, was inclined to look upon the procedure as of trifling moment, and never for a moment thought that I would meet with such a mishap. My experience of the last few months, however, has made me change my views, and view with considerable anxiety all such operations. Within the last six months I have had one case of the most grave hemorrhage, and have personal knowledge of three others, which occurred in the practice of fellow physicians.

Nearly all our authors, up to the last few years, were prone to throw aside the question of severe hemorrhage with the remark that "it was never severe or dangerous." Of late, however, nearly all laryngologists are looking at the matter in a different light, and recognize the fact that alarming hemorrhage following amputation of the tonsils is not uncommon, and advise care in its consideration. When we consider the great number of operations that are performed yearly on the tonsils, associated with operations for adenoids, we can see that this advice is timely. Before going into the details of the causation of the hemorrhage, its control or possible prevention, I wish to

recite the history of the four cases mentioned above.

C. E. C. consulted me October 13th, 1902, about his ears, and while making a diagnosis of the aural difficulty I noticed that his tonsils were enormously hypertrophied. At this time nothing was done either for the ear or throat. I advised, however, that the tonsils be removed. He consulted me again on the 8th of January, 1903, for the purpose of having the tonsils removed. On January 9th, 1903, I operated.

This patient was about twenty-five years of age; about 5 feet 10 inches high and weighed about 180 pounds. He was of exceptionally full habit. The right tonsil was very much enlarged and fibrous, but was not attached to the pillars. The left was more hypertrophical. It was adherent to the pillars and very much elongated downward. It was fully an inch and a half in length. Before operating I used a solution of adrenalin and cocaine on both tonsils for purposes of anesthesia. At first I was inclined to use a cold snare for amputation, but at the last moment I changed my mind and used McKenzie's tonsilotome. The tonsil seemed so free that I anticipated no trouble. At the moment I slipped the ring over the tonsil he gagged severely, thus throwing the tonsil out and free. As he did so I pressed the blade, severing the tonsil close to the wall. Immediately there was the most profuse hemorrhage of dark venous blood; but after a moment it became redder, showing its capillary or arterial origin. By the use of powdered acetanilid and tannin this hemorrhage was partially controlled. On account of the free hemorrhage following the removal of the first tonsil, I was loath to attempt the operation on the second, but because of the earnest desire of the young man and his father, who accompanied him, I removed the second. The elongation of this tonsil was so great that I was not able to get more than the upper two-thirds of it, for which I am now very thankful. The hemorrhage from this latter, or left side, while severe, was not as profuse as that from the right. The bleeding continued at the office for about ten minutes. The amount of blood lost was about half a pint.

The local application of the acetanilid and tannin acid so controlled the hemorrhage that it appeared trifling, and I allowed him to go to his home, about a mile distant. He left my office at 11:45 a. m. At half past 1 o'clock p. m. I was notified by telephone that his tonsils were bleeding severely and had been since 12:30. Not anticipating anything serious, I advised him to come to my office at once, as I expected to use the galvano cautery. He promised to do this, but as he did not appear within half an hour, I became alarmed and telephoned the house and got word to come there at once as he was apparently bleeding to death. The hemorrhage was so severe that he could not move. I rushed out there at once and found him stretched out on a divan with his head hanging over a slop jar—almost in syncope. The blood was pouring from his mouth in a stream, and large coagulated clots almost filled his throat. There appeared to be several pints in the slop jar. The greater part of the hemorrhage appeared to be coming from the right tonsil so I directed my attention to that. With a pad of cotton saturated in adrenalin and tannic acid I controlled the hemorrhage very quickly. In a short time I left the patient comfortable, after giving him and his mother instructions how to control the bleeding if it occurred again. At 4:30 the same afternoon I got word that the hemorrhage had started again and was as bad as ever. With an assistant I went to the house and found him in about the same condition as before. Determined to pursue a radical course, we improvised a cautery from a artery forceps, heated it in a large lamp and cauterized the whole bleeding area. The area of sprouting capillaries was so large that the tonsil hæmostat would not cover it. There was great difficulty in using the cautery, as the pillars which were enlarged and separated to accommodate the enormously enlarged fibrous tonsil collapsed after its removal, and the hemorrhage came from numerous sprouting capillaries deep between them. The cautery controlled the hemorrhage temporarily, but it commenced again at 7 o'clock p. m. Dr. A., who was with me before, went to the case as I would not be

found, and by the use of the same cautery again controlled the hemorrhage to such an extent that he (the patient) was taken to my office, where I gave the whole tonsillar area a cauterization with the galvano cautery. After this last treatment he was put in the hospital and absolute rest enjoined. From this on the recovery was uneventful.

It would be hard to determine the exact amount of blood lost in this case, as there was more or less saliva and secretion mixed with the blood in the receptacles. However, the amount must have been several quarts. The patient was of such a full habit that the amount of hemorrhage probably was out of all proportion to an ordinary case. It was severe enough to create the gravest fears for his safety. It produced the most intense alarm, not only to the parents and friends, but also to the attending physician. At no time was there complete syncope, but four times he was on the verge of it. After the last attack he had to be moved in an ambulance.

In trying to assign the cause for this grave hemorrhage only three or four causes need to be considered, namely, the possibility of having severed an important artery, or an anomalous branch; the influence of the local anaesthetic (cocain and adrenalin), a fibrous condition of the tissue, capillaries or arterioles, and last the possibility of the patient being a hemopheliac or malignant? The first can be dismissed at once. A flat tonsilotome was used, making such an accident impossible; and again the hemorrhage came from numerous bleeding points, which could be plainly seen. The bleeding followed so closely upon the amputation that the influence of medicine used to produce anaesthesia I think can also be disregarded. The cause I am sure can be ascribed to the joint influence of the latter two. The tonsil was a dense fibrous mass, and on account of which the arterioles could not contract. It was only after the most severe cauterization that I was enabled to elicit the information that the patient was a possible bleeder. The father made the statement that he himself was a bleeder and that numerous times he had flooded his pillow at night from nose

bled. The young man himself finally recalled that the only time he was ever cut, which was an insignificant wound of the finger, he bled continuously for several days. This information seems to clear up the matter as to the direct cause in this case.

The second case occurred in the practice of a brother physician. A young man about twenty-five years of age had tonsilitis. To relieve the congestion, the attending physician made several longitudinal cuts in the inflamed tonsil without going very deep. Hemorrhage set in and while it was not severe, it lasted several days, and could not be controlled except by the use of a tonsil haemostat, which was left on for three days. This young man gave a history of belonging to a family of bleeders.

The third case was that of a young lady between twenty and twenty-five years of age. Both faucial and lingual tonsils were enormously hypertrophical and fibrous. I advised that the faucial tonsils be removed, and the lingual tonsil was curetted. The operation was performed by a Chicago specialist under a general anesthetic. In this case a cold snare was used for the faucial tonsils. This young lady almost died from hemorrhage on the operating table. Those hemorrhages recurred several times a day for a few weeks, and at longer intervals for a couple of months. No history could be obtained as to whether or not she belonged to a family of bleeders. The indications are that she did.

The fourth case was also that of a young lady. She was twenty-three years of age. She had the right tonsil enormously hypertrophical and fibrous. By my advise this tonsil was removed. The operation was done by a Chicago physician who is not a laryngologist. A local anesthetic was used and the tonsil removed without difficulty. The hemorrhage immediately following the operation was not severe. Two hours after the operation, however, when she had returned to her hotel an alarming hemorrhage set in and continued for forty minutes. It was impossible to secure medical attention and it ceased only after she became exsanguinated and syncope supervened. Two hemorrhages of twenty minutes duration

each at intervals of a couple of hours, followed and ceased only after the occurrence of syncope. The amount of blood lost in this case was enormous, and the patient did not recover from the exsanguination for several weeks. In this case no large artery was cut nor could we get a history of hemophilia. The fibrous condition of the tonsil was undoubtedly the cause.

Bishop reports a case which occurred in his clinic at the very moment he was dismissing several children upon whom he had just operated. He made the statement that all the cases were free from hemorrhage. At that moment a young student that he had just operated upon was taken with a severe attack which lasted for forty minutes. The hemorrhage was stopped with great difficulty.

Bosworth considers these cases of considerable importance and hence reports quite a number of them. In one case the patient lost twenty ounces of blood in a few minutes and then syncope supervened, checking the hemorrhage. In one case hemorrhage followed the amputation by a galvano-cautery snare. He confesses that he never operates now upon an adult without great apprehension.

McBride in his large experience has had no severe cases, but makes the statement that dangerous bleeding seldom occurs.

Ingals considers the subject of little moment. Still he advises caution and reports a case where he had to resort to the galvano-cautery. In others he had to make pressure with a sponge soaked in per chloride of iron solution.

Sajous says profuse hemorrhage occurs once in five hundred cases, and alarming hemorrhage once in one thousand. He reports two cases. In a medical student seven hemorrhages occurred at intervals of from three to fifteen hours. By pressure he succeeded in controlling it. In the second case he had to twist the tonsillar artery. Until these cases occurred he had absolutely overlooked the possibility of dangerous hemorrhage.

Burnett goes into the subject very exhaustively, thereby indicating its importance. He reports two cases where the hemorrhage fol-

lowed amputation with the galvano-cautery. In one case the hemorrhage occurred the second day, and in the other a week after the operation.

The report from the surgeon general's office gave thirty-one serious cases in twenty-five years.

From the above it is plain to be seen that alarming cases often occur, and some means should be devised for their prevention. The whole question might be summed up as follows: As yet no fatal cases have been recorded. Severe or alarming hemorrhage seldom, if ever, follows the amputation of tonsils in children or young adults. A dangerous hemorrhage may occasionally occur. A very serious one is not unusual, and a moderate one requiring pressure or astringents to control is not uncommon.

The moderate hemorrhages are just as important to the general physician and should be considered just the same as the severe or dangerous ones. The injury comes from its effect upon the minds of the laity. There is at present an ill-judged prejudice against tonsillar operations so that our efforts should be to allay this anxiety rather than to increase it. It is indeed extremely distressing to have a hemorrhage from the throat so severe that the patient cannot maintain the upright position without either swallowing large quantities of blood or having the throat filled with large coagula. When the hemorrhage is so severe that we have to encourage syncope to check it, it is too dangerous or alarming to be warrantable. We never can tell when a moderate hemorrhage will become severe, dangerous or even produce death.

How then shall we control it? A resume of the subject will demonstrate that there are really but three possible causes for the hemorrhage: hemophilia, anomalous arteries and fibroid tonsils, the latter occurring chiefly in young adults or adults. In every case we should determine whether or not the patient belongs to the family of bleeders. If he does, we should refuse absolutely to amputate. The tonsil could, however, be reduced by cautery or dissected out with the cautery knife.

If there is an anomalous artery it is impossible for us to tell, so we will have to meet the emergency as it arises. Make pressure. Cauterize or perform torsion as the case seems to warrant. The ligation of the internal carotid, seldom if ever seems necessary or warrantable. The galvano-cautery will usually suffice.

From all reports the dense fibrous tonsil of young adults seems to produce the most frequent and severe hemorrhages. Since then alarming hemorrhages have followed its amputation by the ordinary tonsillotome, galvano-cautery snare and cold snare, what shall we do? In many cases the tonsils are so much enlarged that something has to be done. I should put the plans of operation in the following order, as productive of the most danger:

1. Removal by the bistoury. A plan which is almost obsolete.
2. Removal by the tonsilotome, which elevates the tonsil.
3. Removal by the flat tonsillotome. McKenzie.
4. Removal by the galvano-cautery snare.
5. Removal by the cold snare.
6. Dissection, or tonsilleotomy by the galvano-cautery knife requiring several sittings.

I should hesitate now about removing by amputation the fibrous tonsils of people over twenty-five years of age, and especially if they are densely fibrous.

Discussion.

Homer M. Thomas, Chicago, Ill.: I have been performing tonsilotomies for twenty years and the experience gathered from that period of tonsil work is another illustration of the adage that it is the unexpected that happens in tonsillar operations. I know of no means by which the tendency to tonsillar hemorrhage can be detected previous to the actual operation. The tonsillar hemorrhages which, as a rule, are the most troublesome, and therefore give rise to the greatest alarm, are those in which a previous tonsillar operation has been attempted with the result of removing only a portion of the tonsil, leaving a fibrous or cicatricial stump, which when cut through with the tonsillar knife, or the bistoury spoken of by the essayist, leaves a fibrous stump in which the contractile tissues of the tonsil are so thickened and so interfered with that hemorrhage results from the inefficiency of the tonsillar stump to become closed by the formation of a clot.

I recently had an experience that was so distressing in one of these tonsillar operations,

largely because of the chagrin which developed from what I supposed would be the best and wisest course to pursue in attempting to prevent a hemorrhage. The patient, a young lady some 18 years of age, came to me for the removal of two large hypertrophied tonsils, not specially cicatricial in character, soft and in which the blood supply apparently was in no degree excessive. A friend of the patient recently had been operated upon and severe hemorrhage had resulted, and my patient was very anxious to avoid a repetition of her friend's experience. In order to be exceedingly careful I operated with the Matthieu tonsilotome on a Monday morning, and kept the patient under observation for several hours. The hemorrhage was only slight; the clot formed naturally and appeared to be strong and fibrous in character so that I finally permitted the patient to return home.

On the following Wednesday I removed the other tonsil in the same manner and had only a very slight hemorrhage. On Thursday morning, about seventy-two hours after the removal of the first tonsil, I was summoned to arrest a sudden arterial hemorrhage of the tonsilar stump on the right side, the tonsil which was removed first. An examination of the throat revealed the fact that the clot, which had apparently formed seventy-two hours previously, had broken up leaving the tonsilar wound open and bleeding freely. The only way in which this hemorrhage was controlled was by means of ice followed by the application of dry ferropyrin powder to the stump.

In this case there were no lines of prevention that suggested to me any way of foreseeing secondary hemorrhage after such a length of time, nor the possibility of avoiding the ulceration of the clot after a period of seventy-two hours.

A somewhat safer tonsilar operation is that of the galvanocautery dissection of the tonsil. The effort is made to obliterate entirely all of the tonsilar tissue. The reason for this is held to be that the presence of any tonsilar tissue, no matter how little, is at once a source of inflammation and repeated disturbances in the tonsil. A confrere of mine recently did this operation and unquestionably removed all of the tonsilar tissue, but twelve hours after the operation a most serious hemorrhage occurred which could be controlled only by the pressure of a specially adjusted instrument to the tonsil surface.

E. Fletcher Ingalls, Chicago: This very interesting paper was right to the point and it is a very timely paper inasmuch as it deals with dangers which are not very infrequent. I have often seen very alarming hemorrhages, but must confess that I was not aware that there were any report of fatal cases. It seems to me that there must have been numerous fatal cases that were not reported, however, because it is not infrequent that repeated hemorrhages occur and the patient dies thirty-six hours after the last hemorrhage. Possibly such a case would not be reported as having died as a result of this hemorrhage.

The means that were suggested by the author for checking the hemorrhage cover, I think,

practically all of them. The fact that the hemorrhage ceases when the patient faints has been taken advantage of in some cases, and fainting has been induced for the purpose of checking the hemorrhage. This can be done without losing all the blood that is in the body by causing the patient to sit up, and holding the arms and thighs, save what blood we can. Keep the blood away from the head, and the patient will faint much sooner than when allowed to bleed it all out.

The hemorrhages I have seen have occurred partly after my own operations and partly after the operations of others, but in my own I have not seen serious hemorrhages, excepting in a few cases where I have removed tonsils where they were inflamed, or where I have removed comparatively small tonsils. I have done this a few times because the patient suffered severely from repeated attacks of tonsilitis. I have lifted these glands up and removed them with the tonsilotome, and I have had hemorrhages from these cases in about fifty per cent. I do not do this any more.

The galvanocautery usually checks the hemorrhage, but in one case from which I removed the tonsil with the galvano-cautery I could not check the hemorrhage in this way. The hemorrhage came, I believe without the tonsil having been removed. I cauterized repeatedly with great care and finally had an opening about one-quarter of an inch in diameter and one-half inch in depth. I saturated a plug of cotton with a mixture of tannin and succeeded in checking the hemorrhage.

In my hands tannin has been a much more satisfactory remedy for checking the hemorrhage than have the iron preparations. It has seemed to me that a thick solution of tannin might be injected into the tonsil stump or just beneath the surface, if necessary several injections in different spots could be made, and that hemorrhage from a number of small vessels could be checked in this way. The operation that to me has seemed most satisfactory where there was danger of hemorrhage, was by the use of the cold wire snare, which I always employ in children and under general anesthesia. With the use of a local anesthetic we are very apt to get hemorrhage a few hours after operation when the patient has left the office, and therefore I do not favor its use. When removing the tonsils from children I always give a general anesthetic. The tonsil is carefully lifted up with forceps and the cold wire snare placed over it. I am always very careful to separate the tonsil from the anterior pillar of the fauces to which it is usually attached. If this is done the wire snare slips under and we can remove the entire gland and there is no chance of pulling away the stump.

I had come to believe that this method could not be beat but one day I operated in this way and quite a large stream of blood spurted from the wound and continued to spurt, but fortunately the child was under an anesthetic. If it had not been we would have had a very serious time. I caught the stump with forceps and quickly put a ligature around it. But I want especially to urge you, gentlemen, when operating on the tonsils of children to use a cold wire

snare. The operation by means of the cautery knife I do not favor, as it causes so large a wound, such extensive cicatrization, so much reaction, and the results are not any more satisfactory than with other methods. Besides the discomfort after that operation is very much greater, as a rule. In the case of small tonsils I adopt the method of simply cauterizing them, not to cut them out, but cauterizing them in two or three places; passing an electrode, one-eighth inch wide and one and a half inches long, into the tonsil in one or two places at a time. I cauterize frequently, from time to time, until the gland is reduced in size sufficiently so that it gives no more trouble. The objection to this method is that it causes the patient about as much discomfort each time as would a radical operation. But the radical operation is too dangerous in the case of these very slightly enlarged tonsils. The operation of simply cauterizing and allowing the gland to contract is sufficient, as a rule, and not dangerous.

J. Holinger, Chicago: As to the mortality in these cases from hemorrhage,—I know of one case that occurred in the practice of a friend of mine where death followed hemorrhage after amputation of the tonsil. So that it is not that they do not occur; they simply are not placed on record. For many other reasons there are many other ways of getting rid of the trouble in such a tonsil. The tonsil is a lymphatic structure, and as such it will become hypertrophic through an infection of some kind or other. Infectious material is, therefore, the thing that we have to look for primarily. We can always find that in the crypts and plenty of it. The point I want to make is this: To get rid of the trouble in the tonsil all you have to do is to take a bent probe, probe these crypts, and then with a sickle knife dig down into each crypt and slit it open. The patient will stand that very nicely without an anesthetic; in fact, the pain is so slight that he is hardly conscious of what has been done. When the crypt has been slit open, pass into it a probe wrapped in cotton saturated with hydrochloric acid. Thoroughly wipe out the crypt; get out all the infectious matter and within three or four days, or at the most a week, the tonsil, no matter how big and clumsy it may have been before the operation, has shrunk considerably. If you watch the case further and see that the wall of the crypt does not heal together again, but keep it open, you will not have any more trouble with that crypt.

You can treat the whole tonsil in one sitting without any trouble. I have seen cases that have been amputated in which the tonsil again increased in size because on the amputated surface a fibrous scar formed which choked the opening of the crypt so that any infectious material that got into the crypt could not get out. Consequently the lymphatic tissues simply swelled up again. I slit the crypt and the patient is forever rid of his trouble. There is no discomfort after this little operation, and the final result is just as certain and more so than in any case of amputation of the tonsil.

G. P. Head, Chicago: One method of checking the tonsilar hemorrhage has not been spoken of. Dr. French uses *veratrum viride* for these cases of severe tonsilar hemorrhage. The

method is a very remarkable one. I have put it into practice and find that it works to perfection. I anticipate the relief of pressure that comes after removing the tonsil by injecting *veratrum viride* directly into the peritonsillar tissue. It is an easy method and it never fails.

S. E. Mackellar, Decatur, Ill.: I know of at least one case that died after a tonsilotomy that I would like to mention.

Dr. Ryan (closing the discussion): It, of course, must be plain to you all that in the time allowed me I cannot discuss all the points brought out by the various speakers and that for that reason I omitted many cases and many things that might have been mentioned for the control of hemorrhage.

In regard to the report of deaths,—I simply made the statement that no reports had been made I at least could not find them in the records, and some of the best authorities I consulted did not find any, but I really cannot see why deaths should not occur, especially if the tonsilar artery had been cut.

In regard to the control of hemorrhage by inducing syncope,—that, of course, is a reasonable and an efficacious method, but I was looking at it from the standpoint of the practitioner and not from the side of the hospital. If the case is so severe that we have to induce syncope, or that we have to depend on it, it is too severe to be warrantable if some other plan of procedure can be followed out. It is an excellent method, however, and one of the best for controlling hemorrhage.

The plan of injecting *veratrum viride* is a rational one because the drug lowers blood pressure and acts exactly the same as in cases of syncope; there is a lowering of the blood pressure and the heart loses force. But some of these cases are so severe, and the hemorrhage occurs so rapidly, that you have no time to inject *veratrum viride*, or you could not get its action quickly enough to do any good, so that you must depend on some more efficient means?

In regard to Dr. Ingals' remarks about the use of the cold snare,—I stated in my paper that I had the cold wire snare in my hands and was ready to use it, but when I looked at the tonsil it looked so inviting and seemed so easy to remove that I changed my plan and used the MacKenzie tonsilotome instead of the snare. If I had used the wire snare I probably would not have had such a severe hemorrhage.

In regard to Dr. Holinger's remarks on the slitting of the tonsilar crypts and removing the infectious matter,—that is a very good method in some cases. You can do exactly the same thing with the galvano-cautery by cauterizing the crypts, and I believe that that is much more efficacious than slitting up the crypts. And if the tonsil is very large you cannot reduce it altogether by means of this slitting process because you have a whole body of fibrous matter left, and it seems to me that the irritation would continue just the same as before the operation.

ACCIDENTS OF THE ANTRUM, WITH SPECIAL REFERENCE TO A PECULIAR CASE.*

BY E. V. D. MORRIS, M. D., D. D. S., GALESBURG.

Mr. President and Members of the State Medical Society: My object in bringing this subject before you is not so much to give you instructions or advice, as to obtain your opinion and advice in regard to one certain case, that has given me a great deal of trouble. This case has caused more than one physician to make a mistake in diagnosis, and has and still is, the cause of much suffering and trouble to the patient. I will devote my allotted time more to the clinical history and treatment of this particular case, than to a general discussion of accidents and diseases of the antrum in general.

Theodore Holmquist, locomotive fireman, aged 35, while looking out of the cab window of his engine, on his way between Chicago and Aurora, was struck by some missile, presumably from a passing train, on the left cheek in the position of the infraorbital foramen. He was knocked backward inside the cab, but not rendered insensible. He was taken to Aurora and placed in the hospital where he remained two days, then removed to his home in Galesburg, Ill., where I was called November 20, 1901. I found him in great pain in the region of the injury, accompanied by headache, fever, nervousness, insomnia and irritability which necessitated me giving him something to relieve these symptoms; on account of his continued suffering he called me from one to three times every day, until January 28, 1902, when I had him removed to the Galesburg Sanitarium for an operation, thinking possibly we might discover a fracture and loose particles of bone, which if removed would relieve him. One of the reasons for so thinking was that there was an opening in the position of the injury, which was discharging pus, blood, etc.

He was anaesthetized and an opening was made which uncovered the orbital place

of the superior maxillary bone, showing an opening into the antrum of Highmore, surrounded by fractures of the orbital plate and particles of loose bone. These I removed by curettement and thinking it best to have free drainage of the antrum, I made a counter opening through the canine fossa inserting a drainage tube. This operation seemed to do no good whatever, did not relieve the pain or other bad symptoms, one of which was the difficulty in opening the mouth. The lower maxilla was only slightly movable, allowing an opening of about 1-16 of an inch, making it almost impossible for him to take any solid food. The opening in the canine fossa soon closed up, and on the 28th day of February, 1902, it was necessary to reopen the canine fossa into the antrum. This opening was again washed out daily with antiseptic solutions, such as sterile water, boric and permanganate of potassium solutions. The drainage and other things continued to do no good. Along about this time the discharges of blood pus, etc., began to be very profuse and offensive, both from the opening above and below.

Various times he went to Chicago and was examined by different physicians, among them being Doctors Senn, Hartman, and Ochsner. Going at one time to the Presbyterian and another to the St. Anthony Hospital. Most of the physicians who examined him in the early part of the summer of 1902, advised waiting for the necrosis and separation of the bone, stating that they could not tell at that time whether an operation would be necessary, and if it was necessary it would be best to wait a while. Some advised immediate operation, but the operation was postponed from time to time until February 11, 1903, when the last one was performed. This was done by making the opening into the canine fossa larger and eurenting the antrum thoroughly. During the eurentement there was removed numerous pieces of bone and a piece of wood (a part of which I show you here) one inch long and 1-16 of an inch wide, which was probably imbedded in the ethmoid bone. This operation had the effect of immediate

*Read at 53d Annual Meeting, Chicago, May 30, 1903

closing up the upper opening, but the lower opening still continues to discharge some. The opening from the antrum into the nose still continues to discharge quite a good deal of blood and pus. The pain, headache and other symptoms are either gone, or greatly modified, except when he catches a severe cold. The movements of the lower maxilla remain about the same.

So much for the history and treatments of this case. How many and how serious were the mistakes in treatment, I will leave you to judge and invite your full criticism and also advice to future treatment, this being a case in which I have great interest.

Of course in the beginning I made a mistake in taking it for granted that there was only a fracture, not believing it possible for a sliver to penetrate so deep, or probably such a thing did not enter my mind, as the external injury was so very slight. Generally in all cases of injury and fracture of bones they will heal together in some way, when nothing is to prevent and the above case was quite a puzzle, until I discovered the sliver of wood.

To come to the subject of general troubles of the antrum, all of which give great amount of trouble, as you all know, and are hard to handle with satisfaction to the patient and doctor. Ordinary catarrhal conditions of the antrum rarely ever get well without an operation. Then as a rule they cure easily. Probably the best place to drain the cavity is by an opening through the cavity produced by extracting a tooth, though if the tooth is sound, making the opening through the canine fossa is next preferred. With foreign bodies the most common to be found in the antrum are pieces of toothpick, straw, cotton and the like, which the patients themselves insert through some opening, probably trying to apply some sort of medicine to relieve a pain. These substances can be easily removed and generally produce no necrosis of the bones or difficulty in curing. Ordinary irrigation, or for that matter ordinary drainage through free opening is generally sufficient. My previous experience with foreign bodies in the antrum are extremely limited, this being

the first case of the kind, at least the first case that I recognized as being a foreign body, unless you could consider the apex of a tooth protruding into the antrum a foreign body, of such cases I have seen a few, and I presume it has been the lot of most all of you to have the same experience.

Ordinary blows from any cause whatsoever is a fruitful source of diseases of the antrum of Highmore. This may be produced by fracture of bones or the concussion may be set up an acute inflammation which fails to recover. I have looked the literature of the subject over, as much as my limited time permitted and I have utterly failed to discover any case similar to the one above quoted, though of course there may be hundreds of the kind reported that have not come under my observation, and the members of this Society may have cases in their practice that are similar. At the present date I am somewhat at a loss to know what advice to give the patient, as he is very anxious to know what his condition is to be in the future, so he can arrange his business accordingly, and I desire to be fair and just and give him such advice as in the future will prove to be true, which is as you will all recognize a very difficult thing to do.

There is one thing that I desire to state in connection with operations for draining the antrum of Highmore, and that is we can tell a great deal in regard to the difficulty of operating and opening the cavity by examining the mouth. A high, arching, hard palate indicates, generally, a small antrum and probably thicker walls, while one with low arch would indicate exactly the opposite. It is always best in these operations to give an anaesthetic, though many times the patient would easily stand the operation without one. When an anaesthetic is not given, it is well to have an attendant to assist you, as it is just possible that when the operation was partially finished your patient would take a notion, on account of the pain and suffering, to get up and leave, if he should happen to be of a nervous disposition, and it might be that you would have the instrument in the wound and would not be able to get it from him.

While studying in Vienna Dr. Hajek, our teacher in this branch, used to impress upon us the necessity of taking these precautions, and he used to quote to us some of his experiences with patients, who left him suddenly during the operation.

By removing the inferior inturbinated bone we may often benefit these cases and once in a while will cure them. This is brought about by allowing a freer drainage from the cavity through the nose. In ordinary catarrhal conditions of the frontal and other sinuses this will go a good ways in curing nearly every case. The study of all kinds of catarrhal conditions of these parts is only just begun and we all have many times felt the need of better treatments for these cases. It is a common saying among the people, "Oh, if you have catarrh, there is no use in trying to cure it and there is no use spending money to treat it." This is not as it should be and we should all strive to learn a little something that will be beneficial in treating them.

Discussion.

A. J. Ochsner, Chicago: Mr. Chairman.—As Dr. Morris mentioned that I saw the case he has reported, I will say that it was an easy matter to determine that there was suppuration of the antrum, but the cause of it no one could determine. The history of the injury was such that neither Dr. Morris nor anyone else could have suspected a foreign body the size he has reported, and so one could not have the suspicion which Dr. Morris had of a piece of necrosed bone acting as a foreign body. The cause at the present time may be still a piece of necrotic bone which keeps up the infection, or it may be another piece of wood. In the only other case I have ever seen of this kind, a case also of railroad injury on the Burlington, which was reported in the Chicago Medical Recorder, the first suspicion of a foreign body arose from the fact that in sneezing the patient forced out a nail an inch and a half long. Then, I made an opening, and thought we would find some necrotic bone, we removed a piece of wood two inches in length. In this case also no one at the time of the injury had suspected that such a large-sized foreign body had been introduced, and so it is possible there is still more foreign substance in this antrum.

REPORT DELINQUENCIES.

We are still receiving a few complaints that members whose names are on the mailing list are not receiving the Journal. Please report any failures so that we may call upon the postal authorities for better service.

THE TREATMENT OF EYE INJURIES.*

BY H. GRADLE, M. D., CHICAGO.

Perforating wounds of the eyeball force upon the surgeon a grave responsibility. The general practitioner who is usually the first to see the patient, ought to share this responsibility with the consulting oculist. I will attempt to present in this paper the most approved rules of practice in a more compact form than can be obtained from text books.

In all injuries we must seek to distinguish between the immediate effects of the traumatism and the additional lesions due to infection. The distinction is of the utmost prognostic importance. Unless the eyeball is mechanically destroyed or disorganized by a copious hemorrhage into the vitreous body every uncomplicated traumatism ends in recovery, though not necessarily in functional integrity. But even though much damage may be done to sight an injury not complicated by infection causes neither prolonged inflammation nor danger to the fellow eye. Whenever the inflammatory reaction exceeds the degree of irritation necessarily produced by the traumatism, it is caused by infection, either primary or secondary, and the persistence of such inflammation not only increases the damage to the injured eye but haunts the experienced observer with the specter of impending sympathetic involvement of the second eye. Pronounced infection is easily recognized by any of its characteristic signs, viz., diffuse vascularity, not merely localized around the wound, or increasing after the first 24 hours, pain after the first day, tenderness to pressure, diffuse corneal haze and dullness, exudate in the pupillary space and opacity of the vitreous. It is only in the mildest instances of localized infection that doubt can arise whether the symptoms are due to the trauma or to the infection.

The cleansing of an ocular wound should be mechanical. All dirt and tags of loose tissue should be removed with forceps and scissors. We cannot disinfect the conjunc-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

tiva by means of antiseptics. They irritate without accomplishing the desired object. The prolapse or protrusion of the iris through a wound in the cornea or sclera needs prompt attention. Every iris entanglement means at least delayed and faulty healing and often persistent irritation. Besides it invites infection primary as well as sometimes at a much later period long after recovery. If the prolapsed iris cannot be pushed back easily, it should be snipped off completely, so as to remove it from the wound. After the lapse of some 72 hours the entangled iris has formed so firm an adhesion that it cannot be readily removed. A small prolapse apparently in the process of healing may now be let alone. But if it keeps the eye in a state of irritation or if cicatrization does not proceed in a normal way, the prolapse should still be abscised. As a rule, the abscission cannot be done completely, in which case we should resort to very cautious searing of the iris between the edges of the wound by means of the cautery or a heated blunt hook. Skillfully done this is not dangerous but efficient.

Gaping wounds through the sclera or corneo-scleral margin should be closed by stitches through the conjunctiva. If this is not mechanically possible it is often best to dissect off a bridge of conjunctiva by undermining and to cover the wound with it. This, however, is a rather delicate operation.

In every instance of perforation of the eyeball the pupil should be kept permanently wide by atropin to guard against iritis or to minimize its dangers. This rule is imperative and its omission should be censured.

A well applied bandage is of importance whenever gaping of the wound might permit prolapse of the iris or of the vitreous body. In all other cases a shade (against light) is just as serviceable as a bandage, and indeed, decidedly safer than the latter if there is any conjunctival secretion.

When the lens has been injured cataract will necessarily follow. This can remain stationary if the rent in the capsule is small enough to close itself; otherwise it is bound to be progressive. It is generally deemed best to let the cataract alone until the eye has become quiet. If, however, the swelling

of the injured lens is such as to produce alarming irritation the lens should be removed by extraction.

In every instance of eye injury the greatest anxiety pertains to the possibility of a foreign body, as the latter is very likely to carry infection with it. Such infection is rarely recovered from if a foreign body is allowed to remain in the eye. Even in the rare instances in which a sterile foreign body remains in the eye without irritation it is very likely to lead ultimately to ruin of the eye by its chemical action. Such aseptic inflammation, however, does not endanger the fellow eye. Every effort should hence be made to ascertain at once the presence or absence of a foreign body. The most direct proof is its visibility in the anterior chamber, or in the depth of the eye by means of the ophthalmoscope. Conversely, a satisfactory ophthalmoscope examination, if possible, can assure us of its absence. If opacity of the pupil prevents inspection, we can depend both positively and negatively on the evidence of an X Ray photograph, provided it be taken by an expert. Probing for a foreign body should be absolutely condemned.

Foreign bodies, if not of iron or steel, can be extracted only in those very exceptional instances in which they are fully accessible to inspection and to forceps introduced through a suitable wound. In all other cases immediate enucleation is the safest rule.

The extraction of iron chips by means of the magnet constitutes the greatest advance in ophthalmic therapeutics within the past 25 years. It may be stated in round numbers that of all magnet operations about one-third save useful sight, one-third save a blind but harmless eyeball, while the last third are failures. The failures are largely due to deferred operations, as every hour of delay increases the severity of the infection. Besides the prognosis depends to quite an extent as well on the size of the chip, as well as its accessibility. Nevertheless, the results in operations done within a few hours after the accident are considerably better than the general average. Hence, the magnet extraction should be done as early as possible.

It would carry us beyond the limits of this paper to discuss the technic of magnet extraction. Suffice it to say, that while the Haab giant magnet has a distinct advantage in some cases, for most purposes iron chips can be removed just as safely with the inexpensive small electro-magnet of Hirschberg or any of its modifications.

When an injured eye shows evidences of infection every possible effort should be made to combat this as long as there is no absolute indication to sacrifice the eyeball. Absolute rest and avoidance of light during the acute period, atropin pushed to the greatest possible dilation of the pupil and moist heat externally are standard measures of recognized efficiency. The introduction of iodoform powder or paste into the wound, or into the anterior chamber is a method still on trial. Fairly definite results have been obtained recently in beginning suppuration starting from wounds in the sclera by inserting the platinum cautery loop through the wound into the vitreous and bringing it into a glow momentarily. Of internal medication salicylate of sodium has been found the most satisfactory. But we must not trifle with such a serious condition by toying with this drug. Salicylate of sodium has no practical effect unless given in large doses. The nearer we can reach a daily amount of 10 grams (150 grains) in an adult, the surer its action. Ten grain doses are useless. It is tolerated best in the tablet form. Solutions are sure to disturb the stomach. Aspirin has been praised as a substitute in case of irritable stomach. I have not used the latter personally. Ringing in the ears usually restricts the increasing administration. But it is often better for the patient to stand the annoyance than to forego the benefit of the salicylate. More serious disturbances, like prostration or delirium are very uncommon. Salicylate of sodium, however, is not a specific, and in infection of great severity it may prove inefficient.

Mercury has been the customary drug in infectious cyclitis but has hitherto been used more as the result of impressions than on account of any definite proof. Within the past two years Schirmer has published a large series of eye injuries with unusually fine re-

sults, which he attributes largely to mercury used in the form of inunctions. In view of the excellent treatment pursued by him otherwise, I am personally not convinced what role mercurialization played, but would certainly consider it proper at present to give the patient the benefit of the doubt.

In view of the hopeless prognosis of an eye which is beyond a certain stage of cyclitis, and the great danger to the fellow eye, it is important to know when conservatism should give way to removal of the eyeball. It is often a very difficult task to arrive at a definite decision in doubtful cases. The amount of sight still left is no absolute criterion. It can only be said that the better the sight of the injured eye, the less the damage done and the better the chance of recovery. The decision that no further attempt should be made to save the injured and infected eye must be based on the extent of the inflammation, taking into account the time since the injury. A cyclitis which does not begin to decline any during the second week and which does not recede at a steady rate after that period is extremely inauspicious. An eye that has not become quiet within seven weeks after the infection is a permanently dangerous eye. The more diffuse the inflammatory condition, the poorer the prospect. The more localized the lesion, the better the chance of recovery. Punctate deposits on the rear surface of the cornea, closure of the pupil by exudate, diffuse and persisting cloudiness of the vitreous make the prospect more and more gloomy, while tenderness to pressure persisting after the third week, and pronounced softening of the eyeball render enucleation imperative.

THE SURGICAL TREATMENT OF TRACHOMA WITH A REPORT OF CASES AND DEMONSTRATION OF METHOD.*

J. WHITEFIELD SMITH, B. S., M. D. BLOOM-
INGTON.

Lecturer on Physiology and Hygiene Illinois Wesleyan
University, Oculist and Aurist Chicago and
and Alton Railway Company, Ophthalmic
and Aural Surgeon Brokaw Hospital.

Trachoma is an infectious inflammatory disease of the conjunctiva, characterized by

*Read at 53d Annual Meeting, Chicago, May 30, 1903

a purulent secretion, and the development of an hypertrophy of the membrane.

Trachoma is marked by successive stages. We might compare the hypertrophic process to the steps of an incline plane—from a small beginning, the hypertrophy of the conjunctiva slowly and steadily increases; step by step it gradually develops, attended by a train of symptoms both objective and subjective until it reaches a limit which varies in different cases; then its disappearance begins, which also is marked by gradations.

In the retrogressive stage we note the cicatricial condition of the membrane with contraction. This is nature's way of effecting a cure and in this sense the disease may be said to be self-limited. But at this point it would seem necessary to define what is meant by the term "cure." We are not to understand that the conjunctiva passes through these successive stages of inflammation and ultimately returns to its normal condition. The hypertrophic process induces changes in the conjunctiva that are lasting, and the lids bear the evidences of the disease that may have occurred years ago.

Then when we speak of a "cure" for trachoma we can only mean that the specific hypertrophic process has been terminated, and that any inflammatory complications that may have arisen in the course of the disease have subsided.

There are few cases cured in which the conjunctiva regains its normal condition and the lids or cornea do not suffer some permanent impairment as a sequel. This is possibly only in the very slightest attacks or when the case comes under observation very early.

There is a direct relation existing between the degree of hypertrophy attained and the amount of cicatricial contraction following as well as the duration of the disease; the greater the degree of hypertrophy the greater the amount of contraction and the longer time will be required for the disease to run its course. With this in view it would seem that the rational treatment would consist in the employment of measures looking forward, first, to the resolution of the inflammation; second, the displacement of the hypertrophy of the conjunctiva; and third, to re-

duce the sequelae of the disease to a minimum.

The object to be attained by surgical interference is not that of an immediate or radical cure of the disease, for the granulations vary in size and the larger ones only are accessible for operative treatment.

Numerous small granulations in different stages of development are always to be found in trachoma. These grow rapidly and attain considerable size in a short time. Hence we can not expect to effect a cure by simply removing the fully developed granules. It is necessary after the developed granules have been removed by an operation and the reaction subsided, to apply caustics to destroy the small ones.

What then are the objects to be attained by surgical procedure in the treatment of trachoma?

The surgical treatment that seeks to remove the developed granules has for its objects the following:

First. To shorten the duration of the disease. This is of no inconsiderable importance to the patient, for trachoma is necessarily tedious and its duration unless properly treated can be counted by months and even years. No case should be regarded as cured as long as there is a vestige of hypertrophy remaining in the conjunctiva.

Second. Limiting the amount or degree of hypertrophy. Attention has already been called to the fact that there is always a corresponding amount of cicatricial contraction in proportion to the degree of hypertrophy attained. Surgical procedure not only tends to lessen the amount of the existing hypertrophy but also limits or prevents its farther development.

Third. Lessening the inflammation and purulent secretion. In operative treatment the vessels of the conjunctiva are depleted and this acts favorably on the inflammation. The removal of the granules relieves the mechanical irritation, such as pressure and friction on the eye ball.

Fourth. By lessening the dangers of inflammatory complications of the eye ball and also by the state of sequelae. By the former we mean pannus, corneal, ulcers, iritis, etc.,

and by the latter reference is made to entropion, ectropion, symblepharon, corneal opacities, etc.

Ophthalmic surgeons are very well agreed as to the essentials and objects to be attained by an operative procedure, but in regard to the methods, a wide range of opinions may be entertained. The ideal operation for the radical cure of trachoma would be excision of the retrotarsal fold, where the granulations are principally located, but this is not permissible because of the amount of contraction following in the conjunctiva.

The following methods have been employed with varying degrees of success: Excision, abscission, scarification, opening follicles with a lance or needle, curettement, electrolysis and operating on the developed granules by special kinds of forceps.

The thought to be emphasized in all operative procedure by mechanical means, is the danger arising from the cicatrix or scar producing deformity in the lids. The author's forcep has been found convenient in the surgical treatment of trachoma, and its advantages may be briefly summarized:

First. The granulations are punctured at their crests and their contents evacuated without much traumatism to the conjunctiva.

Second. The incisions are uniform and practically of an even depth, so that the conjunctiva settles back against its basement membrane producing a reasonably smooth and even surface.

Third. The tissue mainly involved in the operation is the developed granules; the intervening conjunctiva is not greatly implicated.

Fourth. By piercing the crests of the developed granules and evacuating them by gentle pressure the inflammatory reaction is not very marked.

Fifth. In simply piercing the granules not much of the surface of the conjunctiva is destroyed and this compensates to a certain extent the subsequent contraction in the disease-process.

In some of the other methods which have been mentioned, for instance, the scarifica-

tion of the conjunctiva the incisions are not uniform; some are deep, others are shallow and again some are deep in one portion and shallow in other parts, the resulting surface is irregular and uneven, and operative cicatrices are to be found on the conjunctival surface of the lid.

In curettement a portion of the developed granules are cut off, and an undue amount of shrinking may be expected as a result aside from the contraction of the conjunctiva occasioned by the disease itself.

By taking the granules one by one and transfixing them with a lance or lanee-needle, a number of small linear scars mar the lid.

Excision of the conjunctival tissue *en masse* is impractical, because of the subsequent shrinking.

Abscission of the individual granule is also followed by contraction. In freeing the conjunctival surface of the developed granules by surgical means the less destruction of the membrane the better will be the ultimate result.

I desire to report a few cases which have been selected to show the result of operation at different stages of the disease.

Some were comparatively recent attacks, others were of long standing, and again others had inflammatory complications such as corneal ulcers, pannus, iritis, etc.

Mrs. C. E. W., age 30; nationality, German; occupation, housewife. History of trachoma affecting both eyes for a period of eight years. The lids of both eyes were operated on at St. Joseph's Hospital Sept. 3, 1900. Patient remained in the hospital six days. Uneventful recovery following mild antiseptic after treatment for a short time. Letter of March 18, 1903, states that both eyes are free from granulations.

2. Mrs. W. F. A., age, 40; nationality, American; occupation, the duties of a housewife. Patient had trachoma of left eye of one year's duration. Inflammatory complications, small corneal ulcers, pannus, and mild iritis. The lids were operated on at Brokaw Hospital May 29, 1901. Patient remained at the hospital two weeks. Good recovery. March 27, 1903, patient writes that the eye is free from granulations.

3. Mr. R. L., age, 28; nationality, German; occupation, farmer. Trachoma of both eyes of two years' standing. Inflammatory complications involving the cornea, by both pannus and ulcers. Vision greatly reduced; hypertrophy of conjunctiva very marked and inflammation violent. Operated both eyes, August 3, 1901, at Brokaw Hospital. Patient remained in hospital four weeks. Good recovery of inflammatory conditions and granular process. Sequel—patient has corneal opacities of both eyes, but has regained fair vision and can read ordinary newspaper print without difficulty. March 12, 1903, patient says eyes are free from granulation.

4. Mr. D. V., age, 48; nationality, American; occupation, liveryman. History of granular lids of both eyes for twelve or fifteen years. Cornea of both eyes involved by ulceration. Operated both eyes July 8, 1902. Granular process terminated, good recovery, fair vision, small corneal opacities. Under date of March 13, 1903, patient writes that his eyes are free from granulations.

5. Miss L. P., aged, 10; nationality, American; occupation, school girl. Trachoma of left eye had existed for several months. Her father and also some of her brothers and sisters had granular lids at this time. Inflammatory complications; pannus covering large portion of cornea. Inflammation of the lid intense. Operated at the Brokaw Hospital October 6, 1901. Resolution of inflammation. Pannus disappeared. Vision brightened, eye comfortable. Patient remained at the hospital eight days. Have no record of subsequent history.

6. Mr. R. L. age, 16; nationality, German; occupation, farmer. Granulations of both eyes for seven months. Complications of corneal ulcers of both eyes. Operated at Brokaw Hospital September 9, 1901. Patient remained at hospital two weeks. Inflammation disappearing, vision brightened, secretion subsided, apparent recovery. Patient suffered a relapse of the left eye nine months later. July 14, 1902, removed the granulations that had developed, by the use of the foreep, since which time the eye has been free from them.

MANAGEMENT OF CROSSED-EYES IN CHILDREN.*

BY WILLIS O. NANCE, M. D., CHICAGO.

Eye and Ear Surgeon to Cook County Hospital; Assistant Surgeon Illinois Charitable Eye and Ear Infirmary; Professor Ophthalmology Chicago Clinical School.

The successful treatment of strabismus in children requires much care, patience and perseverance. To attain an ideal result in a given case it is by no means always necessary to resort to surgical procedure; in fact, the large proportion of cases under proper management from the inception of the trouble will yield to methods other than operative, and in those comparatively few instances that require the latter, it should be generally understood that treatment should not end with the tenotomy or advancement of the muscle.

In strabismus the disturbance is primarily with the centers of innervation controlling the deviating movements. The acts of normal convergence and accommodation are interfered with. Single binocular vision, that is, the seeing of the same thing simultaneously with the two eyes, is suppressed. The non-paralytic variety, which, be it understood the writer purposes particularly to consider in the presentation of this paper, develops in the majority of cases before the fourth year of life. Occasionally one meets with a congenital case, or one in which the squint develops later than the fifth year, but the large proportion become manifest at an age when the little one first begins to take notice of near objects, as toys, blocks and the like. The parents often give a history of whooping cough, measles, or a blow upon the head preceding the trouble. The influence of heredity may be traced in about one-half the cases. Practically all present refractive errors. In the convergent variety, by far the most common form, hyperopia is the rule. Astigmatism is almost always present. The squint usually at first occurs periodically, but if no treatment is instituted, it becomes permanent. Even in the early stage of development, it has been observed in most of the

*Read at 53d Annual Meeting, Chicago, May 30, 1903

cases that the visual acuity of one eye is considerably less than that of its fellow.

The end to which the ideal treatment of strabismus should be directed is, first, the establishment of binocular vision. Where this can be accomplished, at least a partial, and oftentimes a total correction of the deformity, concerning which the parents are so solicitous, will result, and also an improvement of the vision of the squinting eye may be looked for. In children under five years, the chance of attaining this result is good, providing the physician has the hearty cooperation of the parents in the treatment outlined. Treatment should be instituted early, and herein lies the key to the successful management of these cases. The custom among many practitioners of advising delay until the patient is old enough, and then to submit to surgical operation is irrational and unscientific, for during the very time that so much could be accomplished in the way of useful training of the visual mechanism, the patient is allowed to drift along, oftentimes for months and even years, until a time of life is reached when much less is to be expected in the way of securing that binocular vision and its consequent benefits so much to be desired in the intelligent management of this class of patients. Let us hope with Priestley Smith that the old idea that the squinting child needs "a little skillful cutting and nothing more," is dying out.

The non-surgical treatment of strabismus comprises the employment of cycloplegics, spectacles, the monocular occlusion pad, the stereoscope, forced ocular gymnastics, and the reading-bar, either singly or collectively. The first mentioned is an essential in the very early period of developing squint, and also as preliminary to examination. The use of glasses is admittedly the most important of the methods suggested. The occlusion-pad, faithfully employed, accomplishes much towards correcting the squint habit. The other aids have important places in later management, either with or without operative accompaniment.

Mention has already been made of the importance of early treatment in these cases. In children of one year or more, atropin or

some other mydriatic is indicated as soon as the squint is first noticed, its action to hold the accommodation in a state of suspense, thereby discouraging the act of abnormal convergence. In a majority of instances a decided improvement will be observed, and in certain cases, this treatment will alone cause the squint to completely disappear. Where improvement is noted, it is usually well to continue the instillations for several months, using the drops of a one-fourth to one-eighth per cent solution of atropin once or twice daily in each eye, duboisin to be substituted in case the patient exhibits a toxic susceptibility to the belladonna preparation.

As soon as the little patient reaches the age of, say two years and a half, a thorough examination should be made for the purpose of fitting glasses. This examination must necessarily, in order to be thorough, be made under the influence of a cycloplegic, and should include the use of the retinoscope, ophthalmoscope, and where practicable, the test-case. It is highly important that all astigmatism be fully corrected. The writer is of the opinion that the accurate application of lenses is as important a phase in the treatment of these cases as is any other feature of it, operative procedure not excepted. Children of three years can generally be induced to wear glasses, and oftentimes they may be employed at an earlier age. I have at present, under my care, a number of patients not yet three, who are wearing spectacles, and have been for several months. The full correction, or very nearly so, as found under complete cycloplegia should be given for constant wear. The eyes should, as a rule, be re-examined every year or two, or oftener, at which time, also, care should be taken to see that the frames are holding the lenses in proper position before the eyes.

The use of the occlusion pad may be begun early in the treatment of strabismus, and its employment constitutes an important feature in the non-operative management. The method consists in the covering of the "good" eye for a certain period each day by a bandage or pad, in order that the squinting eye may be more prominently brought into use. The essential point in the use of the pad is

that it serves the complete purpose for which it is intended, that is, to entirely occlude the vision of the better eye. For this purpose care must be taken that the pad fits snugly over the eye, that no opportunity be permitted for "peeping" at any side. A considerable degree of perseverance is essential to a faithful demonstration of this method, but with the hearty cooperation of the parents, which usually may be acquired by a painstaking explanation of its purpose, an intelligent carrying out of instructions may be looked for. The pad may be successfully employed at a very early age, even before glasses can be ordered.

The next step in the management of these cases is the use of the stereoscope. The ordinary instrument which a number of years ago was so popular in many households, and which may be procured at little cost, may be well employed for the purpose intended. Others, more elaborate in detail, notably that of Derby, and more recently one devised by Worth, are very practical, and intended more for office use. With the ordinary stereoscope, the child's attention is first directed to two pictures of the card separately and is then taught to fuse the two images into one. Daily practice, conscientiously and diligently persisted in, will do much towards the establishment of binocular vision, that feature so much to be hoped for in the rational treatment of strabismus. Several sets of charts ingeniously designed to invoke juvenile interest in the stereoscopic exercises have been introduced, the modified set of Kroll being particularly unique and serviceable. With the stereoscope a certain amount of intelligence on the part of the patient being necessary, this method cannot be made use of to very great advantage until the patient has reached the age of four or five.

Bar-reading and the employment of forced muscular exercises are of sufficient interest and value to deserve mention. The former consists in the holding of a pencil or specially designed rod or bar in an upright position between the eyes and at some distance from a page of reading print to encourage the use of the two eyes together in reading. When binocular vision is not employed there will be a break in the word or

sentence when the line of vision reaches the point over which the object is held. The use of the two eyes simultaneously will, of course, overcome this.

By the persistent employment of certain forced muscular exercises much may be accomplished in the way of straightening the eyes in certain cases. As a post-operative procedure, particularly, has the writer been much gratified with the results obtained. With the head fixed and one eye covered, a pencil or some similar object is carried outward, or inward, as the case may require, as far as the eye can follow it, then rapidly returned and the movement repeated for several minutes with each eye, several times daily, alternating the movement with one upward, downward, and so on. This method has the advantage that no special instrument is required, and the mechanism is so simple that any one with ordinary intelligence can carry out the instructions.

Now as to the operative treatment of concomitant strabismus of early childhood. This feature of its management may be very briefly dismissed. The importance of non-surgical treatment has been fully dwelt upon. Surgical interference is, in the great majority of instances, indicated, or it may be even said, justifiable, only after a conscientious employment of at least some of the so-called orthoptic measures suggested. When such means are proved to be of no purpose, then tenotomy or advancement, or the combined operation, should be done without delay. The writer occasionally operates on patients not yet three years of age, but only where there is such a very high degree of squint as to render the use of glasses valueless until tenotomy is performed. After the tenotomy, non-operative measures, either singly or collectively are employed. It is certainly unwise, as experience demonstrates, to operate the average case until the age of, at least, seven or eight years, be attained, and then only after a thorough examination has been conducted, and usually a course of systematic orthoptic exercises instituted.

In conclusion I desire to direct especial attention to the following points in the consideration of this subject:

1. The ideal treatment of strabismus in children includes the establishment of binocular vision. This result can usually be obtained by early treatment, and in a large proportion of cases, only by persistent and painstaking efforts on the part of the physician and parents.

2. Delay in treatment after the squint is first observed, renders less probable a perfect cosmetic result, and precludes the likelihood of normal vision.

3. The use of atropin is indicated early; glasses in most of the cases as soon as patient is old enough to wear them. The monocular occlusion pad and various orthoptic exercises are valuable adjuncts to successful management.

4. Spectacles should be employed only after a thorough skiascopic and ophthalmoscopic examination by a competent eye-doctor. All astigmatism as well as hyperopia or myopia must be fully corrected and the correction ordered for constant use.

5. Operative interference is justifiable and indicated without delay, after other measures are proven of no further purpose, and in certain instances where the deviation is so extreme as to render valueless any attempt to employ the usual orthoptic exercises.

100 State Street.

THE DANGER THAT MAY LURK IN BLIND EYES.*

BY CASSIUS D. WESCOTT, M. D., CHICAGO.

At the meeting of the Western Ophthalmological Society in April of last year, I made an informal report of three or four cases, illustrating the danger that may accompany the retention of some single blind eyes. The results of a further study of one of these cases and the very great importance of the subject would seem to warrant a more elaborate presentation before this more general audience at this time.

By the use of the term "single" I would eliminate from this discussion such eyes as those which are blinded by optic atrophy accompanying cerebral or spinal disease, by

retinitis pigmentosa, or by primary glaucoma—conditions which, as a rule, affect both eyes. We must also eliminate those single blind eyes which are rendered blind by detachment of the retina, incident to progressive myopia and by detachment which, for want of better understanding of the conditions, we speak of as idiopathic.

The motif for the original communication was supplied by the following:

Case I. *Clinical History.* In September, 1899, J. M. H., aged 20, a medical student, consulted Dr. Brown Pusey and myself, complaining of symptoms of eye strain; headache in the left temporal region and some vague symptoms of discomfort in the use of his eyes, particularly in reading. He stated that the right eye was struck by a flying nail nine years before, since which time it had been blind.

Upon examination, it was found that the right eye was a shrunken, hard and misshapen globe, slightly tender on pressure, but free from redness. The left eye was free from disease, but under complete cycloplegia with homatropin and cocaine, the patient accepted a +0.50 D. spherical lens, which gave him vision equal to 6-5. In accordance with our invariable custom in such cases, we advised enucleation of the useless globe as the surest way of preventing future trouble; but, as it was possible for this patient to have the benefit of the opinion of several ophthalmologists, he was recommended to consult four or five representative men in this city, to see if they would agree with our advice to have the blind eye removed. Much to our surprise, he returned with the statement that he had been told by the men whom he had seen that it would not be necessary to remove the blind eye, but that if any symptoms of sympathetic trouble appeared, it should then be removed immediately. One consultant varied the advice by the statement that it was not necessary to remove the globe, but that were he the patient, he would have the deformed stump removed, because a glass eye would look much better. The patient yielded to our advice, and the eye was removed. A +0.25 D. sphere was prescribed for the left eye, which he has continued to wear.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

The symptoms of which he had complained were promptly and permanently relieved, and he has worn his glass eye with comfort.

The Examination of the Enucleated Globe. The eyeball measured 20 m. m. in the horizontal and 21 m. m. in the vertical diameter. It was divided in the antero posterior diameter. In making the section it was noticed that the globe contained much chalky material.

The remains of the cornea, iris and lens are bunched up in a mass of connective tissue. The retina is completely detached and forms a funnel-shaped arrangement. The choroid is also somewhat detached from the sclera and is largely replaced by plates of bony material.

Calcification of the choroid is a well recognized cause of sympathetic disease, and it is also well known that when sympathetic inflammation once begins, it is usually too late to influence it by the removal of the offending eye. Premonitory symptoms, in the form of so-called sympathetic irritation, are often wanting or are unrecognized until too late.

That there is still a difference of opinion and practice in these cases is indicated by the following experience: In March, 1903, H. G., a blacksmith, was referred for an opinion as to the removal of a blind eye. He gave the following history: Twenty years ago the left eye was perforated by a piece of steel. He did not know whether it was still retained or not. The eye had been much inflamed for a long time after the injury and had been blind ever since.

The right eye was apparently normal, but vision equaled 6-22, not improved by lenses. The patient stated that the vision had recently failed rapidly. Left eye: The globe was much shrunken; the cornea quite opaque and shrunken and contained abundant chalky deposits. The eye was not tender nor red, but imparted to the fingers that sense of resistance characteristic of calcareous degeneration of the contents of the globe. He had consulted two well known ophthalmologists in a neighboring large city, who had advised against enucleation as being unnecessary. He had been referred to me by his family doctor, who thought the eye should come out. I, of course, advised

enucleation and explained the dangers of retaining such an eye, but the patient has not returned.

Ophthalmologists are practically united in the belief that when an eye, long blind from injury, becomes red and tender, it should be removed. That conservative methods have no place in the treatment of such eyes, not presenting clinical evidences of active inflammation, is shown, I think, by the following case:

Case II. *Clinical History.* A man, aged 40, in good general health, complains of soreness and weakness of the left eye. He states that the right eye was struck eleven years ago by a piece of iron, which caused a penetrating wound. As a result of the injury, the right eye was inflamed for a long time, but finally became quiet. Since the injury the eye has occasionally, but only at long intervals, been tender to the touch.

When first seen the left eye had been inflamed for a few days only. Status praesens: The *right eye* is of normal size, the conjunctiva is normal, the bulbar vessels are normal. The central portion of the cornea is a mass of thickened, opaque scar tissue, but around the margin it is transparent in spots; the iris is caught in the corneal scar—anterior adherent leucoma. Vision is reduced to zero. The tension is normal and the eye is not tender on pressure. In the *left eye* there is lacrymation and ciliary injection; the pupil is contracted, and the iris is swollen and lusterless. There is slight pain in and around the eye, and it is tender on pressure. The vision is blurred, and there is slight photophobia.

The diagnosis of sympathetic iridocyclitis was plain, and the right eye—the useless eye that he had been carrying for eleven years—was immediately enucleated. Everything possible was done for the left eye—the patient was well cared for in a hospital—but the eye went from bad to worse, and thirty days after the patient was first seen, one finds in our record of his case: "Eye is quieting, but is shrinking and is blind." The specimen was studied by my associated, Dr. Pusey.

Examination of the enucleated globe. The globe, which was of normal dimensions, was

fixed and hardened in formalin and alcohol. It was divided in the antero posterior diameter, one-half being mounted in glycerine-jelly and the other imbedded in celloidin and sectioned.

There was nothing unusual in the gross appearance of the posterior part of the eye; anteriorly, it was seen that the cornea was greatly thickened, particularly in its center, and the entire pupillary edge of the iris was adherent to this thickened mass. The lens had disappeared.

Histologically, sections of the posterior portions of the globe show nothing of unusual interest; anteriorly, the part of particular interest is the cornea, and the interesting feature of the cornea is the evidence of the existence of a chronic inflammatory process. This evidence consists of regions of cellular exudate, which are found in the cornea, particularly along and just under Bowman's membrane—where this membrane exists. The cells of these regions are rather large, round and oval cells, apparently mononuclear; the nuclei being very regular in size and eccentrically placed in the cells. In preparations stained with haematoxylin-cosin the nucleus takes the haematoxylin fairly well, and the cytoplasm also shows a slightly bluish tint. On account of the method of fixing the tissue, we did not get results with some of the specific staining methods. In the use of the polychrom-methylene blue solution and differentiation with glycerine-ether mixture (Unna's method), we did find an unusual number of mast-cells; these cells were found principally in the looser connective tissue of the cornea in the region of the limbus. Although we are unable to speak definitely as to the type of the cells making up the cellular accumulations, we think it safe to say that, in all probability, most of these cells are plasma cells. At all events, these cells are abnormal, and are there as the result of some abnormal condition—probably some sort of an irritant—and they are a part of the process which is called inflammation—in this case inflammation of a chronic character. Sections were stained and examined for microorganisms, but none were found. In the light of our

present knowledge, such an inflammatory process in one eye is quite sufficient to cause a sympathetic inflammation in the fellow eye. At this point, let me again call attention to the fact that, clinically, there was no evidence that this blind eye was otherwise than in a quiet condition.

At the meeting of the British Medical Association, in 1899, Mr. F. Richardson Cross, Ophthalmic Surgeon to the British Royal Infirmary, read before the Ophthalmological Section a paper entitled: "The Pathological Significance of Sympathetic Irritation and Its Connection with Sympathetic Ophthalmitis." He called attention to the fact that our knowledge of the real nature of sympathetic irritation is still imperfect, and its relation to so-called sympathetic inflammation uncertain, but emphasized the fact that a "Shrunken eyeball seems to be able to excite sympathetic inflammation when it is quite quiet and apparently devoid of any microscopical evidence of inflammation." He quoted Brailey, who has seen many cases of undoubted ophthalmitis, where the first eye, possibly a mere stump at the time of its outbreak, was neither painful or tender, having long been quiet. He also calls attention to the fact that Brailey has reported twenty-nine cases where enucleation was performed for sympathetic irritation, only sixteen of which were cured; thirteen being uninfluenced or made worse. Mr. Cross raises the significant questions, If sympathetic irritation is a pure neurosis, why were not all of these cases cured? Can we always differentiate between sympathetic irritation and sympathetic inflammation? He closes his paper as follows:

"I have no doubt that a seriously damaged eyeball is prejudicial, more or less, to its fellow, and may predispose it to various kinds of discomforts if not diseases, and that those which possess no useful sight should be removed or eviscerated, while a shrunken globe interferes with the safe wearing of a glass eye, and may at any time become a source of danger. A degenerate, inflamed eye seems likely to make an excellent incubator for microorganisms, and it is certainly damag-

ing to the general health, which I have often seen materially benefitted by its removal."

The discussion of the subject was participated in by representative ophthalmologists from France and America, as well as by resident members of the Association. Prof. Landolt, of Paris, made the following statement: "A lost eye which may become a source of danger to the fellow eye should be removed," and added that twenty or thirty years ago such a statement would have been superfluous, as everybody agreed; but since the many proposals have been made to save the healthy eye without enucleation of the damaged one, by such means as the resection of the optic nerve and the ciliary nerves, or by sub-conjunctival injections of antiseptics, there existed a difference of opinion. Mr. M. M. McHardy, professor of ophthalmology in King's College, London, fully agreed with Mr. Cross and Prof. Landolt, and stated that he never eviscerates or does any of the other operations which have been offered as substitutes for enucleation. He said: "Our opinion and advice may, it seems, be briefly and comprehensively summed up in the speech I have to repeat only too often, but happily seldom or never without carrying the desired conviction to the patient: 'My friend, you know that no tenant is better than a bad tenant; I know that your injured eye is the worst tenant you could have. It was an eye while it could see; it may at any moment cause the gravest danger to the sight of your only remaining organ of sight. It is good business to cut a first loss at once, part with the injured, bad tenant, and have peace of mind as to the security of your only seeing eye.'" Prof. de Schweinitz of Philadelphia, who ably represented the eye surgeons of America in this discussion, took a similar view. The published report of this discussion would lead one to think that no difference of opinion existed among those present in regard to the proper treatment of eyes made blind as a result of injury.

At the meeting of the American Ophthalmologist Society in 1900, Dr. S. C. Ayres read a paper entitled, "Observations on Some Blind But Quiet and Apparently Inoffensive Eyes: Do They Produce a Pseudo-Sympa-

thetic Inflammation?" Dr. Ayres opens his paper as follows:

"We are all disposed to treat blind but quiet and apparently inoffensive eyes kindly. We naturally consider a blind eye, which is free from inflammation and tenderness, not the probable source of trouble to the good eye, and it is better for the majority of our clients than an artificial eye. But are these blind eyes as inoffensive and free from danger as we are disposed to think? May they not exert some subtle influence which we, in our clemency, have overlooked? That in many cases blind eyes remain in the orbit for an indefinite number of years, and are not a source of irritation to the fellow eye, is a well known fact. But are they all so harmless? Are they all innocent because some have not been proven guilty of exciting trouble in the good eye? I will leave this an open question."

The following abstracts of some of his cases are of great interest:

Case I. Right eye blind from incised wound, quiet and free from irritation for a period of fourteen years. Left eye very marked failure of vision: extensive exudations into the vitreous. Enucleation of the blind eye and recovery of vision.

Case II. Loss of right eye; globe shrunken, but free from tenderness or irritation. Twenty-three years afterwards, left eye attacked by bullous keratitis, and later on there were exudations into the vitreous. Enucleation of the shrunken stump was followed by complete recovery of the right eye and restoration of former vision.

Case III. Trauma of the right eye and loss of vision; globe not sensitive or irritable. Two years later left eye suffered from intra-ocular hemorrhages and exudations, with impairment of vision. Enucleation of blind eye and prompt improvement of vision.

Case IV. Injury of the right eye in childhood. Lens calcareous and resting in the bottom of the vitreous chamber. Eye free from tenderness. Thirty-five years later, exudation and hemorrhages in the left eye. Enucleation of blind eye and improvement in vision.

Case V. Loss of left eye from ophthalmia neonatorum; globe shrunken but quiet.

Right eye had partial vision through an iridectomy made for visual purposes. Seventeen years later the right eye was attacked by secondary glaucoma. Partially relieved by the use of eserine, but completely relieved by enucleation of the shrunken globe.

Case VI. Sight of right eye lost from detachment of the retina. Submitted to operation for relief. Eye quiet and not sensitive. Two years later, exudations into the vitreous of the left eye. Recovery of vision under treatment.

The eye enucleated in the first of these cases, which was apparently quiet and had been free from irritation for a period of fourteen years, was studied histologically by Dr. Adolph Alt of St. Louis. He found the iris adherent throughout to the anterior capsule of the lens, a dense cyclitic membrane stretching across the anterior part of the eyeball and attached to the posterior surface of the lens, which was cataractous. There was complete detachment of the retina and bone formation in the choroid. The iris and ciliary body were infiltrated with round cells, there were calcareous deposits in the lens with enormous proliferation of its epithelium. There were abundant round cell infiltrations in the cyclitic membrane, the choroid and the detached retina, which, from the avidity with which they took the haematoxylin stain, were judged to be recent. The optic nerve and its coverings and the posterior ciliary nerves also showed round-cell foci, denoting a recent inflammatory process. Dr. Alt closes his report as follows:

"In general, then, it seems clear that while this eye clinically appeared to be quiet and apparently inoffensive (compare our case No. 1, clinical and histological reports), it had all the qualities in it which seem necessary to induce sympathetic inflammation in the other eye—the pathological condition really is of a sympathetic nature and not pseudo-sympathetic."

Case III. *Clinical History.* A man aged 38, a miner, in good general health. He said he had been injured in an explosion some months before consulting us, and that as a result of this accident the right eye had become blind.

Status praesens: The right globe is shrunken and deformed, the cornea is a mass of scar-tissue, and the bulbar vessels are slightly injected; there is slight tenderness on pressure. Vision was reduced to zero. He said that he had seen several oculists, and that only one of these gentlemen had suggested the removal of the eye. The blind stump was immediately enucleated, and the unexpected finding of a piece of iron imbedded in the vitreous chamber in the ciliary region demonstrated without question the wisdom of the operation.

Examination of the enucleated globe. The shrunken and deformed globe was fixed and hardened in 10 % formalin solution and alcohol. It was divided in the antero-posterior diameter and one-half imbedded in celloidin and sectioned. The interesting feature of the anatomical investigation of this globe was the discovery of a piece of iron, which made itself apparent by nicking the microtome knife when cutting the sections. The iron was imbedded in an exudate just posterior to the lens. That the hard substance which nicked the knife was iron was demonstrated by incinerating, in a porcelain dish, a few of the sections cut from the region of the foreign body, dissolving the residue in hydrochloric acid, diluting with distilled water and testing the solution for iron with potassium sulphocyanate. The characteristic iron reaction was obtained. A very beautiful reaction was also obtained in sections soaked in potassium ferro-cyanide and afterwards treated with a dilute solution of hydrochloric acid, when the Prussian blue reaction was shown—the center of the exudate taking on a blue color. Sections of the tissue were stained by various staining reagents, but microscopically, nothing of unusual interest was shown. It is generally admitted, however, that an eye which contains a foreign body, which cannot be removed, is a dangerous eye, and no one hesitates to remove such an eye if it is blind, and the presence of the foreign body is known.

That there is another class of single blind eyes demanding prompt removal is shown by the following:

Case IV...*Clinical History.* A man, aged 56, in fair health only, came in Sep-

tember, 1894, for glasses. With correction, vision in the left eye was normal; but in the right, 6-22 only. The use of a mydriatic was declined, and through the small pupil no cause could be detected for the lowered vision. In March, 1897, he returned for stronger reading glasses. The vision in the right eye was reduced to counting fingers, the nerve head was swollen, and there were some choroidal changes which were not well made out through the small pupil (a mydriatic was again declined). The patient was referred to his family physician for constitutional treatment, and not seen again until February, 1899, when the right eye was quite blind. A cataract had developed, the tension was increased, the eye was a little red, and at times painful. He was asked to come in oftener for observation, but did not return until December, 1899. At this time the cataract was mature, the pupil dilated, the anterior chamber almost obliterated, the episcleral vessels large and tension 2. The diagnosis of probable tumor was made, and enucleation advised and accepted.

Examination of the enucleated globe. The new growth had penetrated the sclera, and a small tumor was found to the inner side of the optic nerve. This growth and the globe were divided in the antero-posterior diameter. The greater part of the choroid was found to be substituted by a pigmented growth, which formed a mass about 1 m. m. thick, and extended anteriorly almost to the ora serrata; the posterior part of the choroid was all taken up by the new growth. Microscopically, the neoplasm was found to be a pigmented, spindle-cell sarcoma, one of those rare diffuse sarcomas—the Flächensarkom of the Germans. The extension through the sclera was found to have taken place along the course of one of the long ciliary nerves.

There was no recurrence in the orbit, but the patient died one year later. Examination of the liver showed multiple tumors of similar histological structure to that found in the eye.

Case V * *Clinical History.* A young

child. The parents—people of great prominence in the northwest and whose statements can be relied upon—said that they had noticed some months before that there was something queer about the child's eye, and fearing it was blind, had taken the child for consultation to a homeopathic oculist of this city, a man of considerable local reputation. The parents stated that the doctor told them to let the eye alone, and that the new formation within the globe "would be absorbed." The eye remained quiet for some weeks, but finally became painful—the formation did not absorb—and the child was taken to Dr. Wood, who immediately made a diagnosis of glioma of the retina and enucleated the globe. The patient died a few months later of metastasis in the brain.

Examination of the enucleated globe. Examination of the globe showed the presence of a typical glioma of the retina in the latter stages of its development, with degenerative changes, including calcareous infiltration, which almost filled the cavity of the globe.

Case VI. *Clinical History.* The patient, a girl, aged 4½ years, was taken to Dr. F. C. Honnold, of Riverside, Ill., by the parents because of the accidental discovery that the child's left eye was blind. Dr. Honnold brought the child to me the next day for consultation.

May, 1899. *Status praesens.* In the *left eye* there is slight lacrymation; the pericorneal vessels are slightly injected; the cornea is clear; the anterior chamber is shallow; the iris is adherent to the lens and the pupil dilates irregularly after the use of atropin; the lens is cloudy and behind it, in the vitreous chamber, an opaque body is seen. The eye is blind, a little tender and the tension is below normal. The *right eye* is highly myopic—at least eight diopters. The diagnosis given was guarded, but we feared glioma retinae. Instructions were given to have the patient brought in frequently for observation. Two months later there had been no change in the conditions, and, as the eye was blind, we advised enuclea-

* This case is from the practice of Dr. Casey Wood, to whom I am indebted for the privilege of reporting it. Dr. Wood gave the enucleated globe to my associate, Dr. Brown Pusey, for histological examination and I mention the case as an awful contrast to the next case which I shall report from my own experience.

tion. The parents refused to have the operation, and we did not see the patient again for five months, when it was brought in because the eye had become red a few days before, after having been quiet for some weeks. Enucleation was again urged and accepted.

Examination of the enucleated eye. The examination of the globe showed a glioma of the retina in the early stages of its development, but with several points of interest. A full description of the tumor may be found in the Transactions of the Chicago Pathological Society, 1899-1900, Vol. IV., p. 33.

The child is living and well now—four years after the excision—and this period is long enough in the history of such tumors to warrant the conclusion that there is practically no danger of recurrence.

We have in the above the histories of several interesting cases. There was too great delay in the removal of four of the six blind eyes. As a result of this delay, the patient in Case II is stone blind; the patient of Case III was permitted to retain for months an eye with a piece of iron in it, and which, in all probability, would have ultimately destroyed the fellow eye; the patient of Case IV for two years carried around a sarcoma, and he is now dead from metastases; the patient of Case V for months was allowed to retain a blind eye, which was gliomatous, and the child is now dead. *Such results are awful.* At any time in a period of eleven years the patient of Case II could have been made absolutely safe from sympathetic trouble, by the removal of the useless blind eye; during months, there is no question of the fact that the steel-containing eye of Case III should have been removed; in Cases IV and V there might also not have been—certainly, the longer such eyes are left alone, the greater is the danger of metastases and death; in Case VI enucleation was done early enough, and the patient is now well.

In spite of the fact that the above paragraph would be a very appropriate one with which to close such a paper, I venture to continue it for the purpose of calling atten-

tion to some recent, important work bearing on one of the operations which has been proposed as a substitute for enucleation—evisceration.

From the clinical point of view, the question of the relative value of simple excision of the eyeball, and the operations which have been substituted for it, has recently been gone over most thoroughly by a committee of the Ophthalmological Society of the United Kingdom.*

Among the conclusions of their report one finds the statements: "We have not found a record of any case of sympathetic ophthalmitis following evisceration, without the insertion of an artificial globe;" and, "We have collected records of five cases of sympathetic ophthalmitis after the operation of evisceration, and the introduction of an artificial globe into the emptied sclerotic" (Miles' operation); and further on, "Whether evisceration is as efficacious as excision can only be definitely determined by statistics gathered from a larger number of cases than we have been able to collect."

The clinical side, however, is not the only one from which this subject has been approached. Very recently, S. Ruge has investigated the question from the standpoint of the pathological anatomist. From the clinic of Prof. Schirmer he obtained a globe on which the operation of evisceration had been thoroughly and carefully done some weeks before it was enucleated. Microscopical examination of this globe showed the presence of spots of retained uveal pigment. Examination of similar globes have been made by Schmidt-Rimpler, and by Pflüger and Deutsehman, with like results. From his own results, and those of Schmidt-Rimpler, and Pflüger and Deutsehman, which he cites, Ruge says that he believes that all of the uvea cannot be removed even by a thorough evisceration, and this being the case, the microorganisms which may cause sympathetic ophthalmitis may also be left in the stump. He closes his article with the statement that extirpation of the bulb does

* (Trans. of the Ophthalmological Society of the United Kingdom, 1898, XVIII, 233).

not offer the same protection against sympathetic ophthalmia as does enucleation.*

When a person has only one useful eye, it becomes of inestimable value to him, and *everything possible must be done to retain that eye in good condition*—there can be no compromise. Evisceration has not been proven to be safe as enucleation. It has long been held that enucleation of the eyeball of a child interferes with the development of the orbit, thus causing greater deformity; and we hear the opinion expressed that it is not good practice to enucleate the injured blind eyes occurring in children, except in urgent cases. My first comment would be that a child has as much right to have an assurance of one good eye, if the other is blind, as a grown person, and that the question of the possible failure of development of the orbit, and, therefore, some asymmetry in the appearance, would have no influence when the safety of the other eye or possibly the life of the patient is in question. But there is good evidence that the development of the orbit is not materially interfered with by the enucleation of the eyeball in childhood. Gordon Byers has reported the examination of ten cases in which the globes were removed during childhood, and, in which he examined the orbits in adult life. He estimated by means of compasses the transverse and vertical diameters of the external orifices of the orbits of the two sides. The differences found between those of the empty orbits and those of the unaffected sides were so slight that they could readily be accounted for by the difficulty in obtaining exactly the same fixed points. His observations showed that no arrest of development had occurred, at any rate, so far as the external orifices of the bony walls of the orbit were concerned.

"If thine eye offend thee, pluck it out."

Discussion.

Lawrence R. Ryan, Galesburg, Ill.: I think this paper is much too important to allow it to go without some little consideration. The question of sympathetic ophthalmia has always been a mooted one and no one man has the right to array his personal experience against the accumulated experience of hundreds of others. In an experience extending

over fifteen years and including hundreds of cases I never had a case of sympathetic ophthalmia, and yet I may be called on suddenly to treat a case. We probably all agree with Dr. Wescott that blind eyes that are sensitive ought to be enucleated and especially if they are producing a sympathetic ophthalmia in the other eye. There is one class of cases, however, that the doctor overlooked, whether intentionally or otherwise; those eyes which are blind from the lodgment of foreign bodies in the anterior part of the eye. I have had cases where small particles of steel entered the lens or iris and as a result of that there was blindness. Perhaps, the doctor would naturally exclude those cases from his classification.

I think the experience of the profession will bear me out in this that a small particle may remain in the lens and the eye be blind as a result of that and still not be an element of danger as far as producing a sympathetic inflammation is concerned. These foreign bodies usually are perfectly aseptic when they enter the eye. They are particles of steel that fly from some other body. For instance, a workman uses a chisel and while striking it a small piece of steel flies off from this. It is probably red hot and therefore very aseptic; it enters the eye but there is no possibility of its producing a sympathetic inflammation. I simply want to call attention to these peculiar cases, not that I want to criticize the paper, because we all agree that where there is a possibility of sympathetic inflammation the eye should at once be enucleated.

Dr. Wescott (closing the discussion): It seems to me that a foreign body in the anterior portion of the eye, especially in the lens, should be dealt with in some way. We can usually remove a foreign body from the lens and then make an extraction of the cataract. Or we can extract the foreign body with the lens as most of us who have had much experience have succeeded in doing. If the foreign body has penetrated to the back part of the eye it cannot be removed, and I was going to say if light preception is lost, we certainly should feel it incumbent upon us to remove the eye. If useful vision, I will say, cannot be restored to such an eye by any means at our command, the eye should be sacrificed, because it is a dangerous eye and in time may cause trouble in the other eye.

GASTROSTOMY BY THE FRANCK METHOD.*

BY JOSEPH B. BACON, M. D., MACOMB.
Surgeon-in-Chief to the St. Francis Hospital.

The history of this case is presented to the Society because of some very interesting and unusual features connected with it; also to criticize the Franek method of performing gastrostomy, after observing the case for two years.

*Ruge, S. Anatomische Untersuchung über Exenteratic bulbi, etc. Graefe's Arch. 1901, LII. 2. 223-232.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

Mr. M., farmer, aged 38, in January, 1901, attempted suicide, using a butcher's knife for the purpose. He drove the knife into his neck at the right greater cornu of the hyoid bone, and up behind the palate, until the point met with obstruction at the base of the skull. He then pushed the blade to the left, completely severing all of the muscles from the anterior border of the hyoid bone to the left greater cornu. Thus the lingual and middle constrictor and stylo-hyoid muscles were severed—the branches of both lingual arteries. He bled freely for a half hour before his condition was known, and the hemorrhage continued until fainting, and complete unconsciousness occurred. The patient remained in this condition until my assistant and I could drive nine miles across the country, to reach him.

We found the man lying upon the kitchen table, covered with blood, thoroughly unconscious, skin cold, pulse barely perceptible, rales in the trachea and bronchi, with slow, labored respiration.

The contraction of the sterno-hyoid, omohyoid and other muscles drew the larynx and hyoid bone down near the sternum, and the contraction of the geniohyo-glossus and other muscles attached to the lower maxilla: drew the tongue up into the mouth, thus presenting as repulsive a looking wound as one would ever see.

The bleeding lingual arteries had filled the trachea and bronchi with blood. The open wound left the posterior nares, pharynx and upper end of the esophagus visible. We could see where the knife had incised the base of the pharynx and been checked in its upward thrust by the bone, at the base of the skull.

Bleeding had ceased when we arrived, and the condition of the patient seemed all but hopeless.

I determined to try and save the man, and, assisted by Drs. Stremmel and Thomas, gathered up the different muscle ends with catch forceps and studied out their relation as best I could preparatory to suturing them in place.

In order not to shock the large crowd of neighbors who had collected in the house and windows, I had one assistant open up the

chloroform bottle and put a few drops on a sponge, so that apparently the patient was being anesthetized. I hastily performed a tracheotomy and placed the tube in position, so that if the wound became edematous after being closed, and the larynx obstructed, the respirations would not be interfered with. Such a thing as asepsis under such conditions was impossible, although we took every precaution not to introduce any new germs.

The muscles were united by layers of buried sutures of catgut, and the fascia and skin with silkworm gut. The angle of the wound on the right side was left open, and a rubber tube inserted down into the esophagus for feeding purposes. So completely unconscious was the man that he never knew we were operating.

Stimulants and normal salt solution enematas were administered, and the patient put to bed and surrounded with hot bottles of water, and after about three hours he began to regain consciousness, and the heart's action and pulse to improve.

He remained in a very precarious condition for two weeks, but under careful nursing gradually gained in strength. The skin and fascia united by primary union, but quite a good deal of suppuration occurred in the deeper muscles.

He had no use of his tongue, except at the apex: could neither swallow nor talk, and the saliva drooled from his mouth. The tube in the esophagus gave him a great deal of annoyance when placed in position for feeding, and also when being withdrawn and reinserted. The tracheal tube was removed after one week.

At the end of the fourth week, when his general condition was improved sufficiently, I explained his unhappy future to him, and advised that he should come to the hospital and have a permanent gastrostomy performed, to which he consented.

On Feb. 26th, assisted by Drs. Stremmel, Jenkins and Thomas, I performed the operation known as the Franek method of gastrostomy. An oblique incision was made, three inches long, one inch below and parallel to the border of the left ribs. Through this a cone of the stomach was drawn out, and

base of the cone sutures with interrupted silk sutures to the peritoneum, where it passed through the abdominal incision. A silk guide suture was passed through the serous and muscular coats of the apex of the cone. A second incision parallel to the first was made through the skin, one inch above the ribs. This bridge of skin was dissected up from the muscle, and under this was drawn by the guide suture the apex of the cone, and fastened to the skin borders of the second incision. The first incision was then closed, leaving only the apex of the cone exposed.

After a week this apex of the cone was opened and a tube inserted into the stomach whenever the patient desired food or drink. In the meantime rectal feeding was resorted to.

The esophageal tube was removed at the time the gastrostomy was performed, and the remaining wound in the neck closed. After the gastrostomy was completed, he began taking quantities of liquid food, and his general condition improved rapidly. He had new ambition, and began learning a new vocabulary, such as one who suffers from cleft palate would use. He also renewed his old-time habit of chewing tobacco, and thus received some comfort from it, and, at the same time, secured an excuse for disposing of the superfluous saliva that had been a great annoyance to him since he had been incapacitated from swallowing.

He is now in robust health, and in addition to taking liquids he chews solid food and blows it into the stomach through the feeding tube.

The gastrostomy was a perfect success for about one year. The constant dragging upon the attachment of the stomach to the skin has gradually drawn the opening over the border of the ribs, and thus the skin flap valve has lost its usefulness, in a measure. As a result, he reports that when he exerts extra muscular effort, such as lifting a heavy weight, etc., occasionally a part of the stomach contents will escape. He is thoroughly satisfied with his condition, but a more sensitive person would be very much annoyed and would demand a secure valve action.

The special points of interest in this case and operation are:

1. The recovery of the patient after having lost so large a per cent of his blood, and also after aspirating so much blood into the bronchi.
2. The extent of the wound and the recovery, or acquiring of a new vocabulary.
3. The gastrostomy.

The success of the Franck method of gastrostomy depends upon the valve-like action of the skin flap, which may be supplemented by a truss pad. Any tissue which is continually dragged upon will elongate. The constant dragging of the stomach, after this operation, upon the skin and subcutaneous tissue anchorage will gradually pull these tissues over the edge of the ribs, and the skin flap will thus lose its valve-like function. The opening into the stomach finally becomes a direct gastrostomy, and requires some artificial means of controlling its action.

Discussion.

A. J. Ochsner, Chicago: Mr. Chairman.—In cases in which a permanent gastrostomy is desired, I believe Dr. Bacon's objection to the Ssabanajew-Franck method is a good one, for the reason he has given, namely, that the tension must be constant, and consequently the invaginated portion will be drawn out. I think the method which has been devised by Kader is better, because the principle to which Dr. Bacon objects in this operation is absent. In the Kader method the stomach is folded in, so that the tension which might occur from the attachment of the stomach to the abdominal wall, would increase the tendency toward closure. In this method, there are a few points that should be borne in mind, if one wishes to have a permanent and satisfactory result. In the first place, the infolding must be sufficient. This is accomplished by making two or three circular purse-string sutures, first making one suture, then another outside of this, and another one outside of that, making as many successive purse-string sutures as would seem to be required to secure a sufficiently solid support; then passing in Lembert sutures and tying them afterwards until you have folded in enough of the stomach wall to have a broad surface in opposition. This portion of the operation is exceedingly simple.

The next point which has to do with bringing about a permanent result, and was not described originally, is to secure a certain amount of connective tissue formation there, which can be accomplished by packing the raw surface in the abdominal wound with iodoform gauze and leaving it in place until some connective tissue has formed, then the constriction is outside of the stomach wall.

A word or two with regard to those cases in which immediate feeding is necessary. This is very important. The opening through which you insert a drainage tube in the stomach, should be punctured in order to separate the muscles of the stomach wall, so that there will be no widening of the opening by the contraction of the stomach muscles. If we use a drainage tube here, which permits of leakage by being partly withdrawn before the wound has completely healed, then the stomach contents, or, rather, the gastric juice, will leak out into the canal just made and will digest the new cells that are formed, and the result will be a direct opening in the stomach, and not a valve formation at all. To prevent that, you must have a tube that cannot be retracted. The most convenient tube we can use is simply a large-sized Jacob's self-retaining catheter. Inserting a probe through one of the openings in the bulb-like extremity the latter can be stretched out, so that the tube is in the form of a thin string when it is inserted; as we relax the tension, it enlarges and this portion is drawn up against the inner surface of the stomach, leakage cannot occur because the bulb-like end of the tube prevents the latter from becoming partially withdrawn, leaving the entire canal which has been formed in contact with the tube and thus digestion of the healing tissues will not occur.

I have made but one Ssabanajew-Franck operation, and it was not perfectly satisfactory. I have made the Kader operation in nine cases, and have found it satisfactory, except in one in which I learned this trick. In the case in which I did not use it, the tube slipped out, and permitted digestion of the stomach wall.

Gustav Kolischer, Chicago: According to the description given by Dr. Bacon in his paper, I should say he did not perform the Franck method in this case, but the Witzel method. In order to prevent the leakage that has been referred to, Maydl, about twenty years ago, constructed a tube. This tube was carried below on the outside. There was not much which could be inflated by another tube. The bulb was placed inside the stomach, and this bulb (referring to diagram) rested outside of the skin. After both balloons were inflated, Maydl expected that the tube would prevent the gastric juice from coming in contact with the mucosa and with the contents of the stomach. Both of his expectations were not realized. He had fistula of the bladder. There is no apparatus which will prevent leakage of fluid from the bladder or out of the stomach to the surface. There is no operation known for establishing a permanent fistula of the bladder where, after a certain length of time, say six months or a year, there will be nothing but a straight canal, no matter whether we operate by the Witzel or Franck method, or whether we use the Maydl tube.

A. I. Bouffleur, Chicago: From Dr. Bacon's description, he did not perform the Franck operation, and I do not see where the Witzel method, referred to by Dr. Ochsner comes in at

all, because he did not use the overlying part of the stomach to make a separate channel.

There are some objections to the Franck method, yet, at the same time, it is a practical method. It is easily and quickly performed, and it furnishes two factors for the control of the contents of the stomach. First, mechanically, you have an opening which rises at a much higher level than the stomach if you are able to bring out a considerable cone. Second, the opening can be arranged so as to be generally quite satisfactory for retention purposes. An incision that is made obliquely has objections, in that the removal of that part of the wall has a tendency to make a circular opening when the patient is in the act of using the muscles as in lifting. A vertical incision through the rectus muscle, on the other hand, has the reverse effect, in that the fibers have a tendency to come closer together and assist in retaining stomach contents. Personally, I like the Franck method, except in those cases in which the stomach is greatly contracted; then, of course, it is almost impossible to bring up a sufficient cone. I recall an instance a couple of months ago in which it became necessary to bring into the wound quite a bit of the omental attachment to the greater curvature of the stomach, in order to get a sufficient cone. This patient had good closure; he had absolute control of the opening. The operation was done for temporary obstruction of the esophagus, and as it became dilated, the use of this artificial fistula was done away with, and it has since closed spontaneously following the application of caustic by the physician who has since had charge of the case. The fact that it has been able to be closed emphasizes the point Dr. Bacon brings out, namely, that after a time this opening will retract; the fistula will shorten, and consequently, as a permanent fistula, it is not as efficient as some of the other methods. The Witzel method has been improved by Marwedel, and the Kader method has been improved by E. J. Senn, so as to increase the efficiency of both of those methods. But that the Franck method is not efficient has been shown by a great many cases not to be the case. While there is some ground for claiming that the Franck method is inefficient for permanent fistula, yet it is not serious and when carefully performed this method will yield quite as good results as any other. In fact no method is universally satisfactory.

Dr. Bacon (closing the discussion): I wish to thank the members for their discussion, because the opinions of those who have discussed it are worth something.

Dr. Kolischer is mistaken about this method being the Witzel method. This is the method that was illustrated in the International Textbook of Surgery, and it is known as the Franck-Sbanajeff operation.

I am very glad that Dr. Ochsner agrees with me that the method will invariably, as a permanent gastrostomy, fail, because the dragging on the tissues will bring them over the edge of the ribs. After reading Dr. Ochsner's new work on Surgery, and having seen his method of gastrostomy, I shall try it in the future, be-

cause I regard it as the most feasible of any of the methods with which I am familiar.

Harrison Cripps makes a direct opening into the stomach, fastens the stomach to the abdominal wall, and makes a direct puncture through it. He says he has achieved excellent results by this method. He leaves within the stomach a small rubber button with a string attachment, and after the patient has feed himself he pulls the string, pulls the button up to the opening, and this is tied over a second one. It is a simple sort of affair.

VIBRATION MASSAGE IN THE TREATMENT OF CHRONIC PRO- STATITIS.*

BY LOUIS E. SCHMIDT, M. D., CHICAGO.

Ever since Finger, Felcki and Casper demonstrated that in inflammatory processes of the posterior urethra, the prostate gland is invariably involved, great interest has been shown in this field of work. New methods for the treatment of prostatitis are still demanding constant attention.

The importance of this organ, the relation to the sexual function, the urinary function and to the general well-being of the male, dates from this time, because not until this period were the pathologic conditions understood, nor the dignity of the changes in the prostate gland appreciated.

During this period of reconstruction, one old traditional error was disposed of. It was the old teaching, supported by authorities of high standing, that the prostatitis in consequence of a urethritis was a rather desirable occurrence. The prostatitis was believed to heal spontaneously, without any treatment whatsoever, in the large majority of cases, and at the same time the supposition was upheld that the inflammatory process leads to fibrous shrinking, thus preventing prostatic hypertrophy. Now-a-days most surgeons, I believe, agree upon the theory that the majority of enlarged prostates are due to primary inflammatory conditions.

The rational treatment of prostatitis was necessarily forced upon those who took an interest in therapeutic measures, because it was recognized that the prostate is not merely an accessory organ, but most decisively influences the *facultas generandi* and *coeundi*.

It is known that the specific function of the spermatozoa is only awakened by their coming in contact with normal prostatic secretion. Furthermore, that the quality and timely appearance of erection and ejaculation are influenced and regulated by the condition of the prostate gland.

The modern treatment of prostatitis consists chiefly of antiphlogistic remedies and the application of massage. The former I will not discuss. The usual massage consists of rotary movements applied by the finger or by contrivances which are intended to elongate or supplant the massaging index finger. In this way pathologic exudates are squeezed out, congestion relieved, and absorption enhanced. It is true that a great many patients thus treated are permanently cured, others greatly improved, and finally a certain number of cases will show no further improvement with this form of treatment. However, to keep the patient fairly free from symptoms, the treatment must be kept up at various intervals indefinitely. In these cases, after the treatment has been kept up for some time one encounters a condition of the prostate where nothing pathologic can be expressed from the gland. To the sense of touch the gland remains sensitive to various degrees. The disagreeable symptoms will frequently occur but especially following excesses. There are some cases in which the previous condition is the immediate result and only result of the infection and inflammation. Other cases, to which I alluded in a former paper, in which the usual massage cannot be undertaken, because it aggravates both the subjective and objective symptoms.

The medical profession has in recent years given considerable attention to the application of vibratory massage to various conditions of chronic inflammation and catarrh. The application of this principle to prostatic massage has been used for some time, but not been taken up generally and yet it appears to be a fortunate idea. The anatomic and mechanic conditions render it quite clear that an effective vibratory massage cannot be applied to the prostate by means of the finger. For

*Read at 53d Annual Meeting, Chicago, May 30, 1903

this purpose mechanic appliances must be used. It has apparently been demonstrated that vibration massage becomes more effective if the number of mechanic impulses applied in a unit of time are in an inverted ratio to the violence of each impulse. In other words, the best results are achieved if the greatest possible number of concussions are applied in a certain unit of time with the least mechanic insult to the tissue with each vibratory movement.

Electric motors with the various attachments and which I will not attempt to describe, but which can be investigated elsewhere, allow the control over the intensity and number and character of the vibrating impulses.

Now as regards the kind of cases to be treated. I have already mentioned certain cases which have been treated for some time with the usual massage but showed no further improvement. Now in these cases the vibratory massage should be given to the entire rectal surface of the gland when patient is in a prone position, and fully require three to five minutes. In a certain number of cases the gland returns to almost its natural consistency, the sensitiveness disappears, the abnormal sensations lessen, and sexual symptoms become more satisfactory. Such a result can only be appreciated when it is remembered that the mental condition of patients of this character are greatly influenced by the prostate. Where such results are obtained the psychologic condition naturally improves and makes men of some of these wrecks.

Another class of cases which are not uncommon are those where the general inflammation has subsided, but left small inflammatory foci. The vibration massage is applied to each nodule—previous to each treatment these areas must be located. Besides, the tip of the instrument locates the sensitive spots when in action. These nodules remain sensitive after the bulk of the gland shows no further abnormal conditions.

The treatment of isthmical inflammations, combined with old infiltrations in the prostatic urethra, and hypersensitiveness of the caput gallinaginis can be advantageously

supplemented and completed by intra urethral vibration. The best contrivance for this purpose is a Benique sound to which a metal spiral is attached, and vibrations given to this with a hammer.

Finally in cases of simple sexual exhaustion, in which no infection or inflammation of the prostate exist, vibratory massage can be advised.

I wish to conclude by stating that my experience has extended over a period of two years and I have found vibratory massage beneficial in a satisfactory number of cases, considering that other modes of treatment were without avail.

THE FINSSEN LIGHT IN THE TREATMENT OF DISEASES.

Some six years ago the Medical World watched with considerable curiosity the experiments of a young Danish physician whose theories annuntiated a Light Cure. Held out great promises. Since then the experimental stages have broadened until they include the realm of practicability. Today no name in the Scientific catalogue is better known than that of Prof. Niels R. Finsen, of Copenhagen. Since the discoveries of Pasteur the Roentgen rays are perhaps the most wonderful Addenda to the history of medicine. But while the latter may be termed the search lights of the modern surgeon and his class in the particular field he has selected Prof. Finsen stands absolutely alone. The aim of Prof. Finsen and the Medical Light Institute is the conquest of superficially seated Consumption and Cancer through the medium of both natural and artificial light. Many skin diseases yield to the methods employed by the element discovery. From a purely aesthetic standpoint therefore the Light Cure becomes a distinct boon to mankind. The highest medical authorities in Europe have visited the Finsen Medical Light Institute of Copenhagen and as a result of their approval the Finsen Light Treatment has been established in Manchester, England, London, England, and the large general hospital at St. Petersburg, Russia. We are pleased to inform our readers that an institution for giving the Light Treatment has been established in Chicago upon the same general outline as the ones at Copenhagen and London. That the reports of the wonderful strides made by the Light Treatment in Europe in the past two years has interested many medical men in America and as a result they have visited the European countries on tours of investigation. Some months ago a number of papers being read before the different medical societies by men who have spent months in the study of the Light Treatment and reported unquestionable results in its favor, therefore, we have no hesitancy in endorsing the treatment and believe the medical profession of this state would be instructed by a visit to the Light Institute and see the famous Finsen Lamp in operation.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Calhoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—Jas. S. Mason, M. D., Champaign.
Christian County—W. T. Bridges, M. D., Stonington.
Clark County—L. J. Weir, M. D., Marshall.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
DeWitt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. M. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jasper County—E. E. Burton, M. D., Newton.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. C. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—J. B. Holmes, M. D., Macomb.
McLean County—A. F. Kaeser, M. D., Bloomington.
Macon County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackey, M. D., Aledo.
Montgomery County—G. A. Cloffelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonsville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.

Pope County—W. S. Dixon, M. D., Rosebud.
Pulaski County—A. W. Tarr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. R. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—A. W. Ball, M. D., Rushville.
Scott County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermilion County—E. E. Clark, M. D., Danville.
Wabash County—J. B. Maxwell, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marion.
Winnebago County—Chas. W. Winn, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyler, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopeston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
Aux Plaines Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynaecological—R. W. Holmes, M. D.
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Loder, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side—Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—Henry F. Lewis, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tiven, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.

The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

SEPTEMBER, 1903.

Those members of local affiliated societies who are not receiving the Journal regularly should notify Secretary Weis at once.

Editor Kreider is expected home the first week in September, and will resume charge of the Journal. He has spent the summer in Switzerland, Germany and France.

We publish in this issue the principals of medical ethics as adopted by the last meeting of the American Medical Association at New Orleans. These take the place of the old code, which has been in use for so many years, and are in fact a modification of it. Every physician should have a copy of this document at hand for ready and frequent reference.

MEDICAL STUDY IN BERLIN.

The superiority—perhaps it is not too much to say the supremacy—of Berlin as a medical educational center is due chiefly to the wealth of clinical material and the judicious manner in which it is utilized. A residence of a year gives a clearer insight into the methods in use than is possible when one is but a casual visitor. It is manifestly impossible to describe at length or indeed even to mention all the possibilities. It may be said, in brief, that any line of study may be pursued in all of its ramifications almost to any length. As an example, we may dissect the brain and spinal cord any number of times, see Krause and others operate for tumors, the removal of the Gasserian ganglion or the branches of the trigeminus and study localization under Oppenheim. We may analyze stomach contents, see Cohnheim, Rosenheim, or Kuttner exhibit clinical cases of stomach disease, observe all varieties of stomach and intestinal operation, and finally examine innumerable pathologic specimens and, if desirable, make a thorough microscopic investigation as well. I will attempt no detailed account, but to show actual conditions, will relate a few incidents of personal observation.

In Max Joseph's clinic I have seen some Sunday mornings from 100 to 150 cases of skin or venereal disease, and week-days the average attendance is at least 30 patients an hour. When Bergmann inaugurated his course for the last semester he operated the first afternoon on four breast cases—a cyst, an adenoma, a carcinoma and a sarcoma. During the past four months he has removed the superior maxilla at least six times in his public clinic, doing a preliminary tracheotomy and administering chloroform by means of a long rubber tube attachment through the tracheotomy wound. The silver tube is covered with compressed sponge, which swells

when moist and in place, and prevents the escape of blood into the larynx during the operation. I have seen Jansen do five mastoid operations in one morning, and nearly every day he does three or four operations either for mastoid disease or through the antrum of Highmore to curet the ethmoid and sphenoid cavities or else through the frontal sinus.

Olshausen operates every day; he has usually two or three laparotomies or hysterectomies with an occasional operation on the bladder, perineum or cervix. I saw him do twelve or fourteen Caesarean sections during the year saving all the children and all but one of the mothers. He brings the uterus out through the abdominal wound, catches the edges of the wound behind the uterus with vulcellum forceps protected with gauze, incises the uterus preferably away from the placental site, which is determined by the condition of the veins and the relationship of the round ligaments, quickly extracts the child, which is passed over to the care of an assistant, and then sews up the uterine and abdominal wounds. This is often done in the amphitheatre before several hundred students, and in the forty-five minutes at his disposal he usually presents three or four other cases as well. I have several times seen students, under his direction, undertake forceps delivery and do other obstetric operations in the public clinic.

Mackenrodt operates almost every day. In addition to the usual gynecologic operations he often does a vesico-fixation—he insists it is inappropriately called vaginal fixation—or removes tubes, ovaries or neoplasms through a vaginal incision either anterior or posterior or both. I saw him do seven so-called total evacuations (*ausräumung*) of the pelvis for carcinoma. He makes, as is generally known, a transverse incision which permits thorough inspection of the pelvic

contents. In addition to the removal of the uterus, tubes, ovaries and when necessary the rectum as well, he usually removes the lymphatics over the iliac arteries and in closing the abdominal wall he uses buried wire sutures for the musculature. My friend, Dr. Kreutzer, of Milwaukee, who served four months as one of his assistants, performed many minor operations and as one of his duties examined about fifty women a day. It afforded me pleasure to observe that the pioneer work of our member, Emil Ries, is recognized in Berlin. When Wertheim came on from Vienna last fall to speak on the subject of carcinoma, on which occasion we both had the honor of being formally greeted at the meeting of the Berlin Gynecological Society, due reference was made to Ries' early investigations. With the exception of an occasional comment of the Murphy button and a mention of Nöggerath's article on gonorrhea, this was about the only occasion when the work of American surgeons was alluded to in my presence.

Duehrssen is another gynecologist who operates as a rule several times a day. He does many abdominal sections but his preference is for the vaginal incision, through which he removes sometimes enormous ovarian tumors. He believes in removal of the lymphatic glands in most cases of pelvic carcinoma, but his technique is practically Wertheim's, the abdominal incision being the usual longitudinal one. In 1902 he did more than 400 operations involving the opening of the peritoneal cavity and his mortality was less than one per cent. Eliminating three fatal cases of carcinoma—desperate cases which others had refused to operate—his mortality is less than one-fourth of one per cent.

In three of the city hospitals, where students are not admitted, the visiting practi-

tioner stands beside the operator and sees every detail of the technique. Opportunity is thus afforded several times a week to see Sonnenberg at Moabit, Körte at Urban and Neumann, the successor of Hahn, at Friedrichshain. Then there is Krause at the Auguta Hospital and Rotter and Israel at other hospitals, all of whom do important major operations three or four times a week. I was privileged to see Krause do his first gastro-duodenostomy, as Kocher advised last December. The operation, performed for carcinoma of the stomach, was pronounced faultless in its technique, but unfortunately the patient died from embolism. I often saw him do the Witzel's operation for oesophageal carcinoma—a method also favored by Bergmann.

To those interested in anatomy the institute in charge of Waldeyer is available. It is possible to arrange, as I did, for private instruction. The study of the abdomen and pelvis is facilitated by the many specimens—preserved in twenty or thirty half-barrels—that were collected or prepared by Hein for use in preparation of Waldeyer's masterpiece, published a few years ago. Hans Virchow will give special instruction in osteology, while Kopsch and other instructors, recognized as anatomists of world-wide reputation, all give private instruction on favorable terms.

The facilities for the study of pathology are ample. With the renowned Orth as Virchow's successor, with Oesterreich, Langerhans and Hansemann each at the head of a different institute, some idea may be obtained of the amount of material at the student's disposal and the exceptional opportunity for observation that is afforded. One American told me he had himself made over four hundred autopsies, and in a course on the pathology of the genito-urinary system given by Hansemann I examined at least

three hundred kidneys, each one presenting an interesting pathologic condition.

As regards bladder work, I may state that my friend, Dr. Ferd. C. Valentine, of New York, catheterized the ureter in more than 300 cases during the few weeks he was in Berlin last fall. Dr. Frederic Noyes, now of London, but formerly one of my Policlinic students, and Dr. Maetke, of Dayton, Ohio, did plaster-of-Paris work for Hoffa several times a week, and operated for the transplantation of tendons and different varieties of deformity. In Lexer's clinic the practitioner—students take turn in acting as his first assistant, and in Borchardt's course on the cadaver every operation known to surgery is demonstrated.

But enough has been said, I think, to give an idea of the rare and wonderful opportunities for study offered by this university. Although I have been privileged, in addition to this last year of study, to spend four years at other European schools since I matriculated in 1873, at the University of Marburg, and although I have had occasion to observe the methods in use in many of our American medical colleges, I am forced to believe that for wealth and availability of clinical material the Berlin university stands today unrivaled. It is but just to add a word of appreciation for the friendly reception and invariable courtesy extended on all hands. The opportunity of association, on terms of intimacy, with liberal-minded men of culture and wide experience, many of them the leaders of modern thought, is of itself an education and an incomparable pleasure, and was to me my most highly prized privilege.

Denslow Lewis.

THE FIELD OF THE STATE MEDICAL JOURNAL.

Since the re-organization movement in the medical profession of the United States, shaped by the adoption of a new constitution

at St. Paul and, which followed close upon the re-organization of the British profession, several state societies have established medical journals to represent their interests.

At present the societies in Kentucky, Michigan, California and New York, as well as Illinois, own and publish State Journals. Several other states, notably Pennsylvania, use private Journals as official organs. Like any new movement the establishment of these society journals, has brought out more or less discussion and some criticism. The criticism is from two sources.

First, those physicians, usually the older members of our societies, who have become attached to the annual volume of transactions and dislike to give it up. Second, those independent medical journals which feel that the establishing of such journals is "interfering with individual rights."

These discussions appearing here and there, led the Editor of the Journal to address a letter of inquiry to twenty or more of the most prominent medical editors in United States asking their opinion of this new departure in medical journalism and the field which they considered such journalistic efforts should cover.

Most of the replies admit that this is a new field and an unsolved problem. Many refer to the Journal of the A. M. A. as an illustration of the highest type of medical society journalism. A number of our greatest medical editors warmly advocate the establishment of the State Journal, not only as "a bulletin of communication between the members," but because the "field is a broad one, untouched by the ordinary Journal." We feel under obligation to our editorial colleagues for their free and frank replies which have been read with great pleasure. The subject has come forcibly to the front during the past few years and each State Society will in turn have it up for criticisms. We

have quoted freely from the letters received, and trust our readers will find the matter of interest and profit.

—:—

Those who prefer the annual volume of transactions doubt the proficiency of the Journal plan and claim that "for society purposes the volume of transactions is the better," that "the annual volume in book form is more satisfactory. * * * * a single volume containing the complete transactions is easy of reference and can be searched quickly; whereas the Journals are liable to be mis-laid, as well as borrowed or stolen, hence are not as easy of reference. Moreover, the index number appears at the end of the year, hence all search before that time for any items becomes irksome."

They point to the fact that the Journal has greater cost production, and makes the securing of advertising and subscriptions, in competition with other journals, necessary. One prominent editor, in advocating the annual volume as against the Journal, says "organs supported by societies * * * * (should) eliminate all advertising in order to be perfectly ethical." We doubt whether our worthy colleague, who is so successful in securing advertising for his own Journal really means to infer that all medical advertising is un-ethical.

Another says that such (State) Journals will furnish "a lever toward the killing out of good journals already established." He further assumes "the sole object should be to gain a wider dissemination of papers read," and that good papers are always in demand by our established journals, therefore, the "effort to establish a (State) journal must be in the interest of those who read papers of practically no merit."

Still other editors modify the above view by saying that while private Journals may "suffer somewhat for a while through the

state journal" that there will be no permanent injury done. Several advocate warmly the annual volume of transactions, but think the State Journal may be "desirable under certain conditions," especially in those states "remote from the large centers they "think it is a desirable thing." It is suggested that "one of the great objections * * * * is that the pages will be over crowded with long original articles which are stale before they can be published."

—:—

Those who advocate the publication of the Journal in preference to the volume of transactions complain that the material of the Society is "buried in an annual volume * * * * and given very little publicity." Several say that "experience in medical organization" shows the "need to publish a journal," which will be of great assistance in pushing and crystalizing the work of organization, and "it looks * * * * best for the profession to have these state publications, and as the general welfare is the thing we must keep in view * * * * such journals should not be discouraged." Such a journal will "improve the status of the medical profession" and "represent the policy of the State Society and affiliated societies." "It will keep state and county societies keyed up to continuous active work." Such a journal "should be published in the interest of the State." That while "state boundries do not eliminate interest" the "chief influence is in the state in which it is published" and that although "independent medical journals may suffer * * * * this would not warrant one in overlooking manifest advantages on the other (State Journal) side."

An editor of wide experience and observation says "it seems to me they (State Journals) also find a large field of importance as news bulletins of what is going on in

medical affairs throughout the state and these tend to consolidate the state medical profession." The editorial pages should deal with all problems of local interest—should fully report meetings of local societies and all matters of medical interest.

While all our great medical centers have their journals, these are in a degree local, in spite of the best efforts of the editor. One will find in most of them that the most frequent writers are from the locality in which the Journal is published, and great national organs have considerable difficulty in steering clear of local influences. The "enlargement of the A. M. A. has been due in greater degree to the Journal of the Association than any other single influence."

The Journal brings the papers of the annual meeting before the members in a live manner, and is a monthly avenue of communication between the officers and members, not only of the State Society but of its affiliated local societies. While such a journal should be conducted as a regular medical journal, it should be largely a record of the profession of its own state.

—:—

The quotations in the preceding paragraphs give very briefly some of the sentiments impressed by our most prominent medical editors regarding the publication of the State Journal. Only two or three have expressed themselves as positively opposed to the plan, and quite a number have volunteered handsome compliments to the Illinois Medical Journal for its pioneer work.

After the establishment of the Illinois Medical Journal there was an immediate growth of interest in organized medicine, which growth has steadily and rapidly continued until our state organization now embraces nearly five thousand physicians. Very few indeed of our independent journals can show a subscription list of five thousand.

We believe that there is a distinct field for medical society journalism, which has not been seriously invaded by the independent journals.

In a great state like Illinois the Journal will have ample material if it keeps in close touch with the doings of its own members and brings to them the best of progress in neighboring states. We doubt very much whether it will ever be the province of State Journals to abstract foreign or national literature or take up any of the several departments which are now so thoroughly covered by our great journals.

In fact we believe that after all there is little competition between a state journal and an independent journal. Each has its field. Nor can we see why physicians should be debarred from the advantages of the advertisement of those things of interest and value to them. Nor do we think a state journal should be denied the advantage of funds which will be derived from legitimate advertising. Undoubtedly such journals should set a wise example in the matter of selecting advertising.

As we see it at present such a journal should publish the transactions of the State Society and of the affiliated local societies. Much earnest and profitable work is being done in these small societies. The medical society is a great educational factor. More than half the education of a physician is derived from association with his colleagues. The Journal should keep its members informed as to what is going on in the state societies of neighboring states. It should keep the profession of the State fully informed as to the doings of the Board of Health and Board of Examiners, state institutions, and all other medical or semi-medical institutions in its state. Local health conditions throughout the State are a source of constant interest, and each offi-

cial reporter and health officer should furnish the Journal full and reliable reports on health matters. New hospitals have sprung up in every part of the State in which advanced medical and surgical work is being done, of which the profession knows little. The State Journal is the natural avenue of inter-communication. With an official reporter in each county it should keep the profession thoroughly informed of all the matters in the state of interest to the profession.

THE VALUE OF BLOOD EXAMINATION IN GENERAL PRACTICE.

Twenty years ago the study of the blood was practically confined to physiologists. Ten years ago it was taken up in hospitals by enthusiastic investigators, who made extensive observations on its physical and cellular changes in disease and who studied the parasites which invade it.

Step by step facts have taken the place of theories and the limitations of hematology as well as its possibilities have been better defined. Today no experienced clinician makes the extravagant claim that the blood offers a ready-made diagnosis for all diseases. On the other hand he appreciates that the blood, bathing as it does every cell in the organism, gives us more enlightenment concerning disease processes than any other single tissue, excretion or secretion in the body, the urine included.

The nature of this information is not always the same.

In certain instances the blood may be the only means of making a positive diagnosis e. g. in malaria, relapsing fever, filariasis, chlorosis, pernicious anemia, leukemia streptococcus and pneumococcus infections. In another group the blood gives us the most reliable symptom as illustrated by the agglutination tests in typhoid, paratyphoid and dysentery.

In a third class of cases the blood examination does not give such decisive information, but throws a side light of varying power upon the nature of disease. We could mention in this class the presence or absence of leucocytosis, eosinophilia in certain parasitic affections and evidences of blood destruction as shown by the size and shape of the red corpuscles.

Finally there are cases in which we wish an accurate determination of the hemoglobin and corpuscular value, either to help in diagnosis or to learn the effect of treatment, or again we may test the coagulation time of the blood in cases of icterus where operation is contemplated and thus measure the tendency to hemorrhage.

Positive findings always carry greater weight than negative; this may be stated as an axiom. The presence of malarial parasites or other organisms is conclusive; their absence is only suggestive. A positive Widal serum reaction is almost pathognomonic of typhoid; a negative result however does not exclude it. A marked leucocytosis often confirms a suspicion of pus or septic absorption, while a normal white count is a less reliable informant.

Is blood examination practicable for the general practitioner? I would answer that it is within certain limits. To assert that all of the above mentioned tests are feasible for the practitioner would be unreasonable, for many of them, especially the bacteriological tests, require much time, considerable experience and facilities such as are found only in well equipped laboratories. Many of the most important examinations, however, are easily learned and require simple apparatus. A Talquist scale for hemoglobin, Thoma Zeiss apparatus for counting the red and white cells, a bottle of triacid stain and a good microscope make up the

essential equipment. One needs a brief preliminary instruction in technique of course, for accuracy is necessary.

In practice the observation of a fresh blood drop on a glass slide under the oil immersion lens will give valuable information concerning parasites, the shape and size of the erythrocytes and the presence of an excessive number of white cells. By this simple means one may discover pernicious anemia, leukemia and malaria.

A count of the red cells and an estimate of the hemoglobin renders possible a diagnosis of chlorosis and determines the severity of a symptomatic anemia.

The count of the leucocytes is one of the most useful examinations and requires only five to ten minutes. Knowing what diseases are characterized by leucocytosis and what are not, one is enabled to obtain a sign of great diagnostic value. A low count would speak in favor of typhoid as against appendicitis. A high count would indicate that chills and fever were due not to malaria, but to some form of sepsis.

Stained preparations are not often necessary.

Should the physician make a routine examination of a fresh blood drop in every new patient and also make a count of the white cells in fevers or other obscure cases many errors in diagnosis would be avoided and disease conditions would be better understood.

Joseph A. Capps.

It will be a great help to officers of the State and local societies if members will call on their local treasurers immediately and pay their dues.

Any member of a local society, county or district who is not receiving his Journal

regularly should notify the Secretary, E. W. Weis, of Ottawa at once. Every member of a local society should receive the Journal regularly each month.

Correspondence.

STRANGULATION IN UTERO.

Sterling, Ill., Aug. 13, 1903.

To Editor Illinois Medical Journal:

I have the honor to report the following case: Mrs. A., aged 28 years, a native of Germany, mother of two living children, both boys, oldest four years, and second two years, both healthy. Mrs. A. was some six months advanced in her third pregnancy met with a fall some ten days since. Said soon after the fall she felt as though there was a terrible battle going on within the uterus with the child, as the motion had been prominent before this last act was more like a lively cake dance; soon after all motion ceased, followed with more or less pains in the back and sides of a mild continuous nature.

Was called to see patient the day following the fall, she was up and about the house attending to her ordinary work, was unable to discover any signs of life of the child. My diagnosis was that the child was dead from strangulation by the cord being wound about the neck of the child, later I called in another physician with the intention of inducing labor pains. It so happened the pains came on a short time before our arrival, I dilated the mouth of the uterus which was soft by digital examination. The course of expulsion was rapid with a breech presentation. I found my early diagnosis was correct, the cord was wound tightly about the neck of the child, the head was discolored and congested, while the lower part of the body was not visably affected. After removing the after birth, severe pains followed contractions, and after reaction there was thirst and high fever for some four to six hours, since then she has been comfortable as one could expect, and the patient is convalescing nicely.

Comments: During a practice of thirty years I have met with two cases only of this nature, and they both died. One of the cases, and that was when I was a much younger man than at this time, I called in two older physicians and they both ruled against me when I urged premature delivery, and as the husband was unwilling for me to act, the case was kept along until the woman died and the child was in an advanced stage of softening with the fatal cord about the neck.

It has always been a wonder to me that our Text Books have not paid more attention to cases of this nature. For if the condition is diagnosed early I am certain more mothers could be saved.

J. B. Crandall.

WHERE SHALL OUR SONS STUDY MEDICINE?
To the Editor of the Illinois Medical Journal:

Recently I received a copy of an annual announcement issued by a professed sectarian medical college located in a western state. In looking over the names of the faculty some rather startling facts are brought out.

One important professor educated his son at a regular school, the son is registered as a regular, and is teaching in the same school with his father. Another prominent professor educated his son at another regular school. Another teacher sent his son to another regular school. Still another professor has two sons in the practice of medicine, both regulars. Some of the teaching corps are registered as regulars. Glancing at the list of the alumni something approaching an exodus, or, more modernly speaking, a grand trek, has taken place to the ranks of the regular profession. A dozen to a score of the former members of the faculty are now regulars. Others are known to be desirous of making the change.

None of the facts mentioned are at all discreditable to those concerned. To me they indicate that the days of sectarian medicine are nearly at an end, and that the final burial can not be far off. Some may be inclined to question the propriety of a man holding a chair in a sectarian college while

sending his own son to a regular institution, but the chances are that the rising generation had a mind of its own, and, being more in touch with the trend of modern thought, made its own selection in spite of the wishes of those older in years.

Progressive men have learned that the medical profession not only tolerates but fosters the largest liberty of opinion and practice, and scientific men are not disposed to promote division where none is necessary. Physician.

OBITUARY.

DR. ROBERT BOAL.

Pioneer Physician and One of the Founders of the Illinois State Medical Society.

In a previous number of the Illinois Medical Journal we published a brief notice of the death of Dr. Robert Boal, but his life and character deserve more extended notice, and none could be more appropriate than the following report of the Committee of the Peoria Medical Society: Mr. President and Members of the Peoria City Medical Society:

Your committee to whom were referred the matter of resolutions, and a memorial record of our late venerable colleague, Dr. Robert Boal, for forty years a member of this Society, feel that both the subject and the object are of more than ordinary character.

A man whose life and memory have virtually covered the space of a century of human experience and progress, is in all walks an object of marvelous interest. When, however, such an one is found whose journey has been largely in scientific and humanitarian paths, such as those necessarily traversed by the physician, it becomes to the medical profession a matter of distinct import, and to those with whom such a one has been closely and intimately associated an impressive lesson in the march of time.

Dr. Robert Boal, who died at the home of his daughter in Lacon, Ill., June 12, 1903, was one of those rare physical and mental characters, that stand out sturdily and serenely amidst the storm of events, and mark the merging of distant generations.

Born in Dauphin County, near Harrisburg, Pennsylvania, November 15th, 1806, young Robert Boal removed with his parents to Cincinnati, Ohio, when he was only five years of age. His parents were of Scotch descent, their ancestors having come to America at an early period. When Robert was only ten years of age his father, who had been in the mercantile business, died, and the boy went to live with an uncle in Cincinnati. His early education was acquired in the public schools of that city, including a course in the Cincinnati College. Later he spent a year and a half in read-

ing medicine with Dr. Wright, of Reading, Ohio, and subsequently with Drs. Whitman and Cobb, who were professors in the Ohio Medical College. Young Boal finally took his M. D. degree from the latter college in 1828. He began practice in Reading, but four years later returned to Cincinnati, where he continued in practice three or four years, a part of that time holding the position of demonstrator of Anatomy in his Alma Mater. In 1834 he visited Illinois, and two years later removed with his family to Lacon (then called Columbia) which continued to be his home until he removed to Peoria, in 1862, having been appointed surgeon on the Board of Enrollment for the fifth Congressional District. He served in that capacity until the close of the Civil War. He examined during that period some 5,000 men, most of whom were mustered into the Union service.

Dr. Boal continued to reside in Peoria from 1862 up to the time of his retirement from active practice, in 1893, when he went to live with his daughter in Lacon, his old home. During his former residence in the last named city, Dr. Boal was one of the original twelve physicians who went to Springfield to organize the Illinois State Medical Society, in 1850, and with the exception of his venerable colleague, Dr. Thompson, of Lacon, was the only survivor of that heroic band. Dr. Boal was always an active and prominent member of the Peoria City Medical Society, and often in his later years expressed the wish, which was gratified, of being able to live to see the celebration of its 50th anniversary. In 1882, then in his 77th year, he was elected to the position of President of the Illinois State Medical Society. It is interesting, in the light of the subsequent years vouchsafed him, to note the following, one of the closing paragraphs of his presidential address on that occasion:

"Ladies and gentlemen of the Society—Indebted to your kindness for the position I occupy today; appearing before you as one of the only two now living who aided in the formation of this Society; with the memories of half a century thronging around me; worn and wearied with the journey of a long life, now near its end, I heartily thank you for this, the last earthly honor I shall probably ever receive."

Little did our revered friend then realize the extent of life allotted him, and little did he think that two decades were yet to his credit, and that during them would be the recipient of that homage which his confereres in the profession have continually delighted to shower upon him.

Dr. Boal was one of the organizers of the Edward Dickinson Medical Club, of this city, and at the time of his death was its last surviving member. Dr. Boal was likewise one of the founders and original incorporators of the Cottage Hospital, of this city, and served for a time on its board of directors. About 1890 he was elected president of the Alumni Association of the Ohio Medical College, and on the occasion of assuming that office delivered a notable address before the assembled guests of his Alma Mater, under the title of "Sixty Years a Doctor." He was before his death the oldest living alumnus.

Of the relation of our honored friend and colleague to affairs at large it is only necessary to recall that while never neglecting his professional duties he never failed to take an active interest and part in other lines of thought and endeavor. He took much interest, for instance, in general politics. He was a potent factor and perpetuation of the Republican party. He was an alternate delegate to the Convention which nominated Abraham Lincoln for the Presidency in 1860, and one of his life-long friends. He was State Senator from 1844-48, and representative in the Illinois legislature for two terms, from 1854-58. During the first of which he was one of the most earnest supporters of Mr. Lincoln for United States Senator, but at whose earnest request he cast his vote for Lyman Trumbull, thereby defeating the hopes of the opposition. In 1855, Dr. Boal was appointed chairman of a joint committee to investigate the affairs of the State Institutions at Jacksonville, and subsequently served for seventeen years as trustee of the Institution for the Deaf and Dumb in that city, for five of them as President of the Board.

In May, 1831, Dr. Boal was married at Reading, Ohio, to Christiana Walker Sinclair, their wedded life extending over a period of more than 50 years. Mrs. Boal was of Scotch-Irish descent, and a lady of intelligence and refinement. She died in Peoria in June, 1883, leaving, besides her husband, two sons and one daughter. Of the former Charles T., is now a business man of Chicago. His brother James, formerly Assistant United States District Attorney, died in 1888, at his home in Chicago. The daughter Clara became the wife of Col. Greenbury L. Fort, a soldier of the war of the Rebellion and afterwards for four terms member of Congress from the Lacon district.

But it was as a "gentleman of the old school," and a colleague of sympathetic instincts and earnest professional endeavor to the last, that we all best knew Dr. Robert Boal. Always interested in medical men, affairs, measures and organization, he was a constant inspirator to those with whom he came in contact. During the whole of his eventful life in this city he seldom missed a meeting of his medical society, and was always ready to give freely of the practical wisdom his mind held in store. He was progressive, and yet conservative in his instincts, measures and methods. As a practitioner he was unusually successful, and was possessed of a tact, and charm, that won and held him friends. As a therapist he was cautious and careful, and consulted when others did not, the claims of his patrons to elegance in pharmacy; a trait which won for him the corresponding detestation of Homeopathy in its earlier manifestations. He never aspired to special position in the realm of surgery, but did much of it in earlier life.

Dr. Boal was really an ardent student, and inveterate liver and reader of good books, and accustomed to burning the midnight oil. He was apparently always of a cheerful turn and happy disposition, and when asked for the secret of his prolonged life said he thought it lack of disposition to worry and fret; for in other respects he could claim no special abstem-

iousness of habit. A year or two before his death the writer of this remarked to him of his freshness, gaiety and cheerfulness and apparent good health. "Yes," he said, "I feel strong, all but my knees, but those are weak and treacherous, and I really find myself living much in the past," and he quoted with him in much apparent satisfaction at their truth the lines of Oliver Wendell Holmes, embodied in the poem on his seventieth birthday:

"But nature lends her mirror of illusion
To win from saddening scenes our age-
dimmed eyes,
And misty day-dreams blend in sweet confusion
The wintry land-scape and the summer
skies."

That, he said, is why I continue to be cheerful and happy. The defects of every age have their compensations, and advancing years have theirs.

And so it came that as nature admonished our old friend and comrade of toil's early release, he dwelt more and more upon the natural associations of the period, and with the thoughtfulness and method which characterized his busy life he arranged with care the circumstances which should be attendant upon the end. Years ago he quoted from a remark of one of his old teachers, and applied it to himself, to the effect that he had been born scientifically, and wished his being to end scientifically. He therefore requested that his body be cremated and his ashes placed by the body of his wife in Springdale cemetery, this city. He appointed his pall-bearers from amongst his professional associates, and all his expressed wishes were complied with as far as practicable.

After a short service over his remains, at Lacon, they were reduced to ashes, which, at the hands of his professional brethren, and under the benediction of Rev. J. H. Moran, were lowered to the side of his sleeping wife on the 17th ultimo, just as the sun was sinking to the western hills.

Thus passed from mortal view the Spirit and remains of Dr. Robert Boal, in full consistency with his self-enunciated creed, borrowed from Bryant's "Thanatopsis:"

"So live, that when thy summons comes to join
The innumerable caravan that moves
To that mysterious realm where each shall take
His chamber in the silent halls of death,
Thou go not like the quarry slave at night
Scourged to his dungeon, but, sustained and
soothed

By an unfaltering trust, approach thy grave
Like one who draws the drapery of his couch
About him, and lies down to pleasant dreams."

O. B. Will,
J. L. Brown,
T. M. McIlvaine,
Committee.

The following resolutions were adopted by the Peoria City Medical Society:

Resolved, That we, the members of the Peoria City Medical Society, in regular session assembled, realize in the recent death of our revered associate and colleague, Dr. Robert Boal,

the passing from amongst us of one who has served as a link between the "old and the new, the then and now," as he himself expressed it. One whose standing and importance in medical affairs and amongst medical men, has been such as to give our local association additional lustre and influence, and its deliberations added interest and weight.

Resolved, That in our personal associations with Dr. Boal, we each and all have ever found him a courteous, kindly brother and helpful friend; one whom it was a delight to honor, and whose cheerful habit and benignant manner, gentlemanly bearing and thoughtful interest, served to provoke that feeling of reverence which we, in common with our colleagues of the State at large, have ever entertained for him through all the advancing years of his long life.

Resolved, That a copy of these resolutions, embodying as they do a brief but heartfelt tribute to the noble life of our illustrious friend and professional brother, be transmitted to the survivors of Dr. Boal's immediate family; to the public press of this city and Lacon, and that a copy, together with the accompanying record of our venerable colleague's life and labors, be kept in the archives of this Society as an evidence of the esteem in which he was held, and as an inspiration to those who may come after us.

PURE FOOD LAW.

Methods Looking to Their Enforcement.

J. C. Ware, inspector for the state food commission, when asked concerning the objects of the pure food commission and their methods, said:

"The main object of our investigations is to see that all food products are properly labeled, so that all the grades of goods may stand on their own merits in the markets, and that inferior goods may not crowd out a superior article. It is not intended to hinder the manufacture and sale of healthful substitutes, as long as they are sold honestly under a true label. The object of the pure food law is to insure that the lower grades or adulterated article shall not come into direct competition with the genuine product.

"For instance, it is not unlawful to manufacture or sell alum baking powder. But such baking powder must be so labeled, so as not to compete with the cream of tartar product. The many glucose products may be labeled with any fancy names which the manufacturer or jobber may please to put upon them, so long as the names are not misleading. Thus, it would be illegal to label a mixture of glucose or sorghum 'Pure Sorghum,' for such a label would mislead the purchaser, although the mixture might suit his taste and his pocketbook. A product must not be labeled that which it is not.

"We have a great deal of trouble especially with vinegar and extracts. The law requires, for example, that lemon extract shall contain at least 5 per cent of oil of lemon, the remainder of the fluid being pure alcohol. Yet lemon extracts are on the market which show no trace of lemon oil or alcohol either, it being wood alcohol with an artificial flavor. We find vanilla

extract, so-called, with no trace of vanilla, but a liquid artificially flavored with a preparation of coal tar.

"Distilled vinegar may be sold with no more restrictions than cider vinegar, provided it is not artificially colored. When it is colored it becomes a counterfeit of cider vinegar, and the dealer is required to label each and every sale 'colored distilled vinegar,' distilled vinegar being perfectly clear and colorless.

"There is a firm in Missouri which ships enormous quantities of colored distilled vinegar into this state, which is guaranteed to be pure cider vinegar, the manufacturer agreeing in a written contract to protect the dealer in the courts, hoping to make enough profit in places where prosecution is not entered upon to pay the costs and still make a large per cent.

"It is contrary to law to label a product falsely, although the formula is printed on the same label. So a bottle containing a quantity of imitation peach butter cannot be labeled 'Peach Butter' with a formula printed on the same label showing that it is of an entirely different substance.

"Here I have a bottle which is labeled 'Peach Butter,' with a formula printed beneath it in small letters. This is contrary to law, because the label is false and in contradiction to the printed formula.

"Here is a box of spice. I don't know anything about it. It may be perfectly pure, and it may not be. That is for the chemists to determine in the laboratories. The law requires that it be absolutely pure, as absolute purity is required in spices, and no adulterations are recognized as legal.

"These bottles of vanilla and lemon extract may be all right, but I do not know. I merely go into a store, make my purchases from the stock, place a seal upon it, cover the name of the manufacturer and the name of the article and send it to the pure food laboratories. Upon a card I make a memorandum of the article, purchase price paid, where bought, etc., with a number corresponding to the number on the article itself. The chemist analyzes it under its number, and submits the analysis to the department, where it is put upon the reverse side of the card which holds the memorandum. Of course, where the fault is merely that the label does not agree with the printed formula, the infringement of the law is very evident.

"Further, every product must be stamped with the name and address of the manufacturer or jobber. And the safest way for a dealer to do is to trade with reliable firms, and compel them to furnish a binding guarantee as to the purity and honesty of their goods. This guarantee should be to the effect that the manufacturer or jobber will protect him in case of prosecution under our food laws.

"Ordinary prosecutions are begun before a justice of the peace. That is the easiest way for all concerned. If a dealer fights the case on the ground that the justice has not jurisdiction under the law, we simply drop it there and have him indicted by the grand jury and prosecute him criminally. Of course the trial in the circuit court means increased costs. As

a rule the dealers will plead guilty before the justice, as being the easiest way out of the trouble, and go back to the jobber or manufacturer and demand the sum of the costs and fine refunded.

"The Grocers' association of this state endorses the food law and the grocers as a rule do what they can to help us uncover deceptions. The grocers want to know just what they are selling, and want their customers to get just what the goods pretend to be. The experience of the department shows that in the central part of the state fully 90 per cent of the food products are just what they are sold to be. In the northern parts it is higher, owing to the good pure food laws which have been in force in Michigan and Wisconsin for a number of years. In the southern part the per cent is lower, because of the nearness to the markets to St. Louis, Louisville and Terre Haute. A great amount of adulterated products is shipped into this state from Missouri.

"I wish to emphasize the fact that it is not intended to hinder the manufacture of healthy substitutes as long as they are sold honestly under a true label, and it is certainly in the true interest, not only of the consumers, but of every honest retailer selling pure foods, who now suffers from the dishonest competition of those falsely branded."

Inspector Ware has been making a very thorough canvass of the stores of various cities in the state.

The present pure food law was passed April 24, 1899, and became effective January 1, 1900. Two or three chemists are kept busy all the time analyzing products. Since the commission has been in working order a very noticeable improvement has taken place in the quality of the food products of the state. Their work is designed to be thorough, competent and effective, and has in a large measure the cooperation of the retail merchants throughout the state.

PRINCIPLES OF MEDICAL ETHICS OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association promulgates, as a suggestion and advisory document, the following:

Chapter 1.—The Duties of Physicians to Their Patients.

Section 1.—Physicians should not only be ever ready to obey the calls of the sick and injured, but should be mindful of the high character of their mission and of the responsibilities they must incur in the discharge of momentous duties. In their ministrations they should never forget that the comfort, the health, and the lives of those entrusted to their care depend on skill, attention, and fidelity. In department they should unite tenderness, cheerfulness, and firmness, and thus inspire all sufferers with gratitude, respect, and confidence. These observances are the more sacred because, generally, the only tribunal to adjudge penalties for unkindness, carelessness or neglect is their own conscience.

Sec. 2.—Every patient committed to the charge of a physician should be treated with attention and humanity, and reasonable indul-

gence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits should be guarded with the most scrupulous fidelity and honor.

Sec. 3.—The obligation of secrecy extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance should ever be divulged by physicians, except when imperatively required by the laws of the State. The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice.

Sec. 4.—Frequent visits to the sick are often requisite, since they enable the physician to arrive at a more perfect knowledge of the disease and to meet promptly every change which may occur. Unnecessary visits are to be avoided, as they give undue anxiety to the patient; but to secure the patient against irritating suspense and disappointment the regular and periodical visits of the physician should be made as nearly as possible at the hour when they may be reasonably expected by the patient.

Sec. 5.—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail on proper occasions to give timely notice of dangerous manifestations to the friends of the patient, and even to the patient if absolutely necessary. This notice, however, is at times so peculiarly alarming when given by the physician that its deliverance may often be preferably assigned to another person of good judgment.

Sec. 6.—The physician should be a minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts, but by the words or manner of the physician, whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

Sec. 7.—The medical attendant ought not to abandon a patient because deemed incurable, for continued attention may be highly useful to the sufferer and comforting to the relatives, even in the last period of the fatal malady by alleviating pain and by soothing mental anguish.

Sec. 8.—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of evil conduct ought never to be neglected. Good counsels, or even remonstrances will give satisfaction, not offense, if they be tactfully proffered and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

Chapter II.—The Duties of Physicians to Each Other and to the Profession at Large.

Article I.—Duties for the Support of the Professional Character.

Section 1.—Every one on entering the profession, and thereby becoming entitled to full professional fellowship, incur an obligation to uphold its dignity and honor, to exalt its standing and to extend the bounds of its usefulness. It is inconsistent with the principles of medical science, and it is incompatible with honorable

standing in the profession for physicians to designate their practice as based upon an exclusive dogma or a sectarian system of medicine.

Sec. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; should endeavor to promote the science and art of medicine and should entertain a due respect for those seniors who by their labors have contributed to its advancement.

Sec. 3.—Every physician should identify himself with the organized body of his profession as represented in the community in which he resides. The organization of local or county medical societies where they do not exist should be effected so far as practicable. Such county societies constituting, as they do, the chief element of strength in the organization of the profession, should have the active support of their members, and should be made instruments for the cultivation of fellowship, for the exchange of professional experience, for the advancement of medical knowledge, for the maintenance of ethical standards, and for the promotion in general of the interests of the profession and the welfare of the public.

Sec. 4.—All county medical societies thus organized ought to place themselves in affiliation with their respective State associations, and then in turn with the American Medical Association.

Sec. 5.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to the patients, as without it their respect and confidence cannot be commanded; and to the profession because no scientific attainments can compensate for the want of correct moral principles.

Sec. 6.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye, and an unclouded mind are essential to the welfare, and even to the life, of a human being.

Sec. 7.—It is incompatible with honorable standing in the profession to resort to public advertisements or private cards inviting the attention of persons affected with particular diseases; to promise radical cures; to publish cases or operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to employ any of the other methods of charlatans.

Sec. 8.—It is equally derogatory to professional character for physicians to hold patients for any surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances; to assist unqualified persons to evade legal restrictions governing the practice of medicine; to dispense or promote the use of secret medicines, for if such nostrums are of real efficacy any concealment regarding them is inconsistent with beneficence and professional liber-

ality, and if mystery alone give them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for any physicians to give certificates attesting the efficacy of secret medicines, or other substances used therapeutically.

Article II.—Professional Services of Physicians to Each Other.

Section 1.—Physicians should not, as a general rule, undertake the treatment of themselves, nor members of their family. In such circumstances they are peculiarly dependent on each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. These visits ought not, however, to be obtrusively made, as they may give rise to embarrassment or interfere with that free choice on which such confidence depends.

Sec. 2.—All practicing physicians and their immediate family dependents are entitled to the gratuitously service of any one or more of the physicians residing near them.

Sec. 3.—When a physician is summoned, from a distance, to the bedside of a colleague in easy financial circumstances, a compensation proportionate to traveling expenses and to the pecuniary loss entailed, by absence from the accustomed field of professional labor should be made by the patient or relatives.

Sec. 4.—When more than one physician is attending another, one of the number should take charge of the case, otherwise the concert of thought and action so essential to wise treatment cannot be assured.

Sec. 5.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed sometimes require the temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time. The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician.

Article III.—The Duties of Physicians in Regard to Consultations.

Section 1.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident.

Sec. 2.—Consultations should be promoted in difficult cases, as they contribute to confidence and more enlarged views of practice.

Sec. 3.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea of a professional engagement to take precedence over all others.

Sec. 4.—As professional engagements may sometimes cause delay in attendance the physician who first arrives should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

Sec. 5.—In consultations no insincerity, rivalry, or envy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

Sec. 6.—No statement or discussion of the case should take place before the patient or

friends, except in the presence of all the physicians attending, or by their common consent; and no opinions or prognostications should be delivered which are not the result of previous deliberations and concurrence.

Sec. 7.—No decision should restrain the attending physician from making such subsequent variations in the mode of treatment as any unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

Sec. 8.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In the first instance the consultant should do what is needed, and in the second should do no more than make an examination of the patient, and leave a written opinion, under seal, to be delivered to the attending physician.

Sec. 9.—All discussions in consultation should be held as confidential. Neither by words nor by manner should any of the participants in a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

Sec. 10.—It may happen that two physicians cannot agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in. None but the rarest and most exceptional circumstances would justify the consultant in taking charge of the case. He should not do so merely on the solicitation of the patient or friends.

Sec. 11.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified, as far as can be, consistently with the conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in the attending physician.

Article IV.—Duties of Physicians in Case of Interference.

Section 1.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice especially on the character and the extent of their medical education.

Sec. 2.—The physician, in his intercourse with a patient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician.

Sec. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided except under peculiar circumstances; and when they are made, no inquiries should be instituted

relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

Sec. 4.—A physician ought to not take charge of, or prescribe for, a patient who has recently been under the care of another physician, in the same illness, except in case of a sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

Sec. 5.—The physician acting in conformity with the preceding section should not make damaging insinuations regarding the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

Sec. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, the former should resign the care of the patient immediately upon the arrival of the family physician.

Sec. 7.—It often happens, in cases of sudden illness, and of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives and who, if necessary, should request the aid of those present. In such a case, however, the acting physician should request that the family physician be called, and should withdraw unless requested to continue in attendance.

Sec. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician, the case should be relinquished on the return of the other.

Sec. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient because of a sudden aggravation of the disease.

On such an occasion the immediate needs of the patient should be attended to and the case relinquished on the arrival of the attending physician.

Sec. 10.—When a physician who has been engaged to attend an obstetric case is absent and another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to the professional fee, but must resign the case on the arrival of the physician first engaged.

Article V.—Differences between Physicians.

Section 1.—Diversity of opinion and opposition of interest may, in the medical as in the other professions, sometimes occasion controversy and even contention. Whenever such unfortunate cases occur and cannot be immediately adjusted, they should be referred to the arbitration of a sufficient number of impartial physicians.

Sec. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as

there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which cannot be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.

Article VI.—Compensation.

Section 1.—By the members of no profession are eleemosynary services more freely dispensed than by the medical, but justice requires that some limits should be placed to their performance. Poverty, mutual professional obligations, and certain of the public duties named in Sections 1 and 2 of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege.

Sec. 2.—It cannot be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; or to testify to the state of health of persons wishing to insure their lives, obtain pensions or the like, without pecuniary acknowledgment. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

Sec. 3.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and if should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

Sec. 4.—It is derogatory to professional character for physicians to pay or offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or to receive such commissions.

Chapter III.—The Duties of the Profession to the Public.

Section 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its laws, institutions and burdens; especially should they be ready to cooperate with the proper authorities in the administration and the observance of sanitary laws and regulations, and they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary policy, public hygiene and legal medicine.

Sec. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

Sec. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects strictly medical, such as involve questions as relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

Sec. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of artful imposters.

Sec. 5.—It is the duty of physicians to recognize and by legitimate patronage to promote the profession of pharmacy, upon the skill and efficiency of which depends the reliability of remedies, but any pharmacist, who, although educated in his own profession, is not a qualified physician, and who assumes to prescribe for the sick, ought not to receive such countenance and support. Any druggist or pharmacist who dispenses deteriorated or sophisticated drugs or who substitutes one remedy for another designated in a prescription, ought thereby to forfeit the recognition and influence of physicians.

COMMITTEE ON MEDICAL LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION.

The Committee on Medical Legislation of the American Medical Association, met at the Holland House, New York, June 7, 1903, adopted resolutions creating a committee to be known as the National Auxiliary Congressional and Legislative Committee of the Medical Profession of the United States. The said committee to be composed of one legalized member of the profession in each county in each State and Territory of the United States and District of Columbia. Their duties being to report legislative matters to the Chairman of the National Legislative Committee.

The following is a copy of the resolutions which were adopted:

Resolved, By the Committee on Medical Legislation of the American Medical Association, that by virtue of and in pursuance of the authority vested in it to devise means for the better promotion of needed legislation relative to the public health and to the medical profession, it hereby creates a committee,

First. To be known as the National Auxiliary Congressional and Legislative Committee of the medical profession of the United States.

Second. To consist of one legally qualified practitioner of medicine in each county of each state and territory of the United States and in the District of Columbia.

Third. To be appointed by the Committee on Medical Legislation of the American Medical Association on nomination by the president of each state and territorial medical association.

Fourth. It shall be the duty of each member of the National Auxiliary Congressional and

Legislative Committee to bring all and only such matters of pending legislation as may be referred to him, either by the legislative committee of his respective state or territorial medical association or by the Committee on Medical Legislation of the American Medical Association, to the attention of the medical profession and the people of his respective county, and by every honorable means, personal and political, individual and professional, private and public, direct and indirect, secure desired action thereon by his representatives in both branches, as the case may be, of the state legislature or of the Congress of the United States. And it shall be his further duty promptly to report all such efforts on his part, first relative to state legislation, to the chairman of the committee on legislation of his state medical association, and, secondly, relative to national legislation, to the chairman of the Committee on Medical Legislation of the American Medical Association.

Resolved, That the chairman of Committee on Medical Legislation of the American Medical Association is hereby directed (a) to procure from the president of each state and territorial medical association nominations for such National Auxiliary Congressional and Legislative Committee; (b) to formulate a list of the chief executive and legislative officers of the United States government and of the government of each state and territory; (c) to collate necessary information relative to the executive and legislative departments of the American Medical Association and of each state and territorial medical association; (d) to formulate a list of the officers of each state and territorial board of health and medical licensing board and (e) to secure a brief summary of proposed legislation, state and national. And he is further directed to arrange the information thus collected into a Congressional and Legislative Directory of the American Medical Association.

Resolved, That these proceedings, together with the Congressional and Legislative Directory above indicated, be published as the ad interim report of this committee, first, by installments in *The Journal of the American Medical Association*, and subsequently in book form, the latter to be issued in anticipation of the congressional and legislative season of 1903-04.

The President is in receipt of a communication from the chairman of the Legislative Committee of the American Medical Association in regard to the aforesaid nomination, which will claim his attention very soon.

State Items.

STATE CHARITIES.

Bulletin Issued by State Board for the Past Three Months.

The bulletin of the State Board of Charities for the three months ending June 30, was issued in July. The receipts of the state charitable institutions during the period covered by

the bulletin were \$528,453.60, and the expenditures were \$515,918.61. The outstanding indebtedness at the close of the quarter was \$61,566.62. To meet this indebtedness the institutions had \$258,067.40 available, making a surplus on account of ordinary expense funds for all of them at the close of the quarter of \$192,294.11.

At the beginning of the quarter covered by the bulletin there were 11,527 inmates present in the institutions and 289 on parole. During the quarter there were 852 admissions, 183 former inmates readmitted, 474 absentees returned, 566 discharges, 161 discharged while on parole, 208 deaths, 856 temporarily absent, 950 on parole at the end of the quarter and 10,584 present. The average number present during the quarter was 11,165.

The total per capita cost of maintenance, gross, was \$40.27. Deducting the receipts not from appropriations, the total net per capita cost to the state was \$37.79.

The best record made during the quarter was by the Soldiers' and Sailors' home, where the net per capita cost to the state was \$29.15. The Watertown Insane hospital was a close second, with a net per capita cost for the quarter of all the institutions:

Elgin Insane hospital, \$41.79.
 Kankakee Insane hospital, \$33.96.
 Jacksonville Insane hospital, \$37.65.
 Anna Insane hospital, \$33.44.
 Watertown Insane hospital, \$30.91.
 Asylum for Incurable Insane, \$41.13.
 Asylum for Insane Criminals, \$51.17.
 School for the Deaf, \$52.61.
 School for the Blind, \$51.53.
 Feeble-Minded Asylum, \$33.98.
 Soldiers' and Sailors' home, \$29.15.
 Soldiers' Orphans' home, \$51.04.
 Soldiers' Widows' home, \$49.91.
 Eye and Ear Infirmary, \$56.97.
 Training School for Girls, \$42.80.

A Correction. In the last issue it was stated that the late DeLaskie Miller of Chicago was born in "New York City," and graduated from Syracuse Medical College in 1842.

According to reliable authority Dr. Miller was born in Niagara county, New York, May 29, 1818, and graduated from Geneva Medical College, New York, in 1842.

Julius Grinker has returned from Europe.

Geo. W. Newton and family sailed for Europe July 18.

Stanton A. Freidberg sailed for Europe July 17.

Dr. G. LeRoy Brown has returned from Europe.

Dr. Henry Gradle, of Chicago, has a summer home in Waukegan.

Dr. Pardee, of Chicago, has a summer home in Highland Park.

Dr. C. A. Potter of Cornell, Ill., has removed to Laramie, Wyo.

Dr. Herman A. White, St. Charles, sailed for Europe, August 4.

Dr. A. R. Edwards is spending his vacation in northern Michigan.

Dr. and Mrs. Wm. Cuthbertson have returned from their European tour.

Dr. Curry, of Streator has just returned from a 5 months sojourn through Europe.

Dr. A. E. Halstead has been appointed on the surgical staff of St. Luke's Hospital.

Dr. Henry Hooper is spending the summer at the Huron Mountain Club, Marquette, Mich.

Dr. E. C. Dudley is spending his vacation at the Huron Mountain Club, Marquette, Mich.

Dr. W. S. Hall is spending his vacation at his summer home Wynnewood, Grand Haven, Mich.

Dr. Ernst Rieble has been appointed an assistant member of the County Hospital Surgical Staff.

Dr. S. C. Plummer has opened an office in the Venetian Building, 34 Washington St. Hours, 10-11 A. M.

Dr. Jacob Schenck, of Mt. Carmel, accompanied by his wife is spending three months in Europe.

Dr. E. B. Hutchinson has been appointed as Adjunct Attending Physician at St. Luke's Hospital, Chicago.

Dr. Gustav Futterer spent a three weeks vacation at Minocque Lake, Wis., returning home Aug. 18th.

Drs. N. S. Davis, Jr., Wm. E. Casselberry, Geo. F. Fiske and Samuel Walker all have summer homes on Lake Forest.

Dr. George Edwin Baxter has opened an office in Suite 1211 Venetian Building, 34 Washington St., Chicago.

Dr. D. R. Brower, Jr., has received the appointment as Clinical Assistant in Manhattan Hospital West, Wards Island, New York.

Dr. P. M. Burke of LaSalle, is enjoying himself in Berlin this month and expects to take in Rome and Vienna before his return.

Gift to Hospital. Abraham Brokaw of Bloomington has made a donation of \$30,000 to the Brokaw Hospital of that city.

Illinois Water to be Analyzed. The State Board of Health is about to make a systematic investigation of the water of different cities of

the state. It will be collected under the supervision of the Board of chemical and bacteriologic examination under direction of Prof. J. H. Long, N. W. U. M. S.

Dr. Wm. A. Pusey has been appointed chief in the Department of Dermatology and Radio-Therapy at St. Luke's Hospital, Chicago.

Kangley, Ill., is suffering from an attack of diphtheria at the present. There being about 10 cases at present with one death so far.

Smallpox in Chicago. Only 39 out of the 311 cases reported showed any evidence of vaccination. Not one of these had a protective mark.

N. Senn is taking his vacation in the West. He was the guest of R. Harvey Reed. Dr. Senn will visit Yellowstone Park and Yosemite Valley.

The work of the summer quarter at Rush Medical College will close September 1, instead of October 1, as has been the custom in previous years.

Will Enlarge Hospital. Alexian Brothers' Hospital, Chicago, has purchased a plat of land adjacent to the hospital 485x125 feet, for \$10,000.

Dr. Frederick Muller, former assistant of Prof. Adolph Lorenz of Vienna has been elected Professor of Orthopedic Surgery at the Milwaukee Medical College.

Dr. Metta Viola Collins, a graduate of the College of Physicians and Surgeons, Chicago, 1903, has decided to locate in Barry, Ill., for the practice of Medicine.

The Summer Course at the Northwestern University Medical School closed August 1, allowing two months for extensive improvements before the Fall term.

Acting Assistant Surgeon Norman Roberts, has been appointed to post in Chicago, vice assistant surgeon, L. P. H. Bahrenburg, who goes to New Orleans for temporary duty.

Dr. Frank Byrnes, of the surgical staff of Cook County Hospital, and also on the staff of St. Elizabeth's Hospital, has been elected junior professor of surgery at the Illinois Medical College.

Association of American Medical Colleges. At the thirteenth annual meeting Fred C. Zapffe, 1764 Lexington street, was elected Secretary-Treasurer and John M. Dodson to the judicial council.

The annual report of the Library Committee of the Northwestern University Medical School shows a material increase in the usefulness and resources of the Medical Library. About three hundred new books have been added during the last year and about \$400.00 worth have been received into the Department for Medical Re-

search. Both Library and Reading Room are accessible to the student body during each school day and the popularity of the Library speaks the value of a good reference library to the Medical student.

Dr. N. S. Davis recently read a paper before the Marion Sims Cedar Valley Medical Society at Clear Lake, Iowa. Dr. Davis discussed "Some Points in the Diagnosis and Treatment of Nephritis."

American Microscopical Society. Prof. Thos. J. Burrill, University of Illinois, was elected president of the American Microscopical Society at its annual meeting held at Winona Lake, Ind., July 29, 30 and 31.

Dr. E. Fletcher Ingals was obliged to give up his trip to Europe on account of illness in his family and instead has gone with his family to Long Island. Dr. Ingals expects to return to Chicago about October 1.

Rush Medical College is offering special graduate courses for practitioners. The courses are of three months duration and are arranged to accommodate those practitioners who desire to study special branches of medicine.

Dr. Maximilian Herzog and Dr. Carl E. Beck have taken a three weeks trip visiting Niagara, the Hospitals in Toronto and Montreal taking the boat trip down the St. Lawrence returning home by way of the Adirondac and Saratoga Springs.

Tetanus. The profession will be interested to know in anticipation of the scientific report, of the cure effected in two cases of Tetanus at the Cook County Hospital by means of subdural injections of anti-tetanic serum after draining off the cerebro spinal fluid.

Through some error the corrected copy of discussions by Dr. Jas. A. Egan, Secretary of State Board of Health, and Dr. Ochsner, of Chicago, were not used in the last issue. Consequently, for this reason their discussions appeared in very incorrect form.

Dr. John Joseph Taylor, a life member of the Society died at Streator, Ill., Aug. 3, 1903, from cancer of the stomach and liver, at the age of 62 years. Dr. Taylor had been a resident of Illinois for 47 years and of Streator for 27 years. He served in the 20th Illinois in the war of the Rebellion.

A Bill of Injunction: Such a bill has been filed against the State Auditor, board of trustees, and contractor, by Joseph Hanreddy, the lowest and unsuccessful bidder for contract to erect eight cottages at the Illinois Hospital for the Incurable Insane at Bartonville. Fraud is alleged.

Deaths in North Central District. Two more members of the North Central Illinois Medical Association have been called from their labors. **Dr. James A. Gregory** of Long Point,

Ill., who was an active member died Aug. 3, at Las Vegas, N. M., from Tuberculosis. The remains were brought home and interment made at Bloomington, Ill.

The Visiting Nurses Association of Chicago is an old and well known philanthropy. The Association is dependent upon the voluntary contributions of its friends for support. The territory of the city is divided into districts and a nurse is assigned to each district. Each nurse is a graduate of one of the best training schools and she renders service to those in her district who are deserving and cases which are not received into the hospitals. During July the nurses made 3,825 visits.

New Physiologic Apparatus. The Frog and Board Myograph and the Monometer Tambour, was the subject of a paper read before the Fifty-fourth annual session of the American Medical Association in the section of Pathology and Physiology, by Prof. Winfield Scott Hall, N. W. U. M. S., Chicago. The paper was approved for publication by the Executive Committee.

The College of Physicians and Surgeons has made a radical change in their curriculum by the introduction of elective courses in the Junior and Senior years. 900 hours of work are required and the student may elect 300 hours of the 900. The specified required amount of work is the minimum requirement of the Illinois State Board of Health and the Association of American Medical Colleges.

The Illinois Medical College has just completed its new buildings on Washington Boulevard. One building will be entirely devoted to the anatomical laboratories and one to the Training School for Nurses.

Mercy hospital is building an addition covering an area 200x47 feet. Dr. Frank Allport has been appointed Clinical Professor of Ophthalmology at the Northwestern University Medical School.

The Chlorids in Nephritis. Widal has coined the term "dechloridation" to express the treatment of epithelial nephritis by reducing the amount of salt. His experiments showed that the ingestion of salt, in cases of interstitial nephritis produced no change in the patient, but in cases of small amounts given in epithelial nephritis caused, edema and albuminuria in direct ratio to the amount ingested. Even the cows that produce milk for nephritis should be given no salt as that amount produces the change in direct ratio. This fact admits of a wider range of diet than heretofore has been allowed in such cases, also marks a valuable therapeutic measure.

The Out-Patient Department of the Northwestern University Medical School was the first Medical School in the city to establish a Milk Laboratory and Diet Kitchen in connection with its Free Dispensary work. The Laboratory has been in operation one year and the results have been most satisfactory. All milk and invalid foods are prepared under the direction of the

Department of Pediatrics. Too much praise cannot be given to those who have in charge the work of Children's Hospital. Several stations for distributing milk to the children of the poor have established about the city and a milk of high grade is being supplied at a very low cost to the consumer. The Medical Staff has done much to improve the quality of milk brought to the city and they propose to issue certificates of grade as to the quality of the milk.

Education of Nurses. Dr. Alfred Worcester is the author of an article written to illustrate the increased necessity for educated nurses. The Medical profession is realizing more and more the importance of an **educated** trained nurse. Many of the training schools fail to give their nurses adequate training, chiefly because of the lack of systematic teaching, by competent teachers of certain fundamental principles, before the nurse enters into the practical work. Higher standards of requirements for admission to the school should be made and thus offer greater inducements to those who have spent years in pursuit of higher education. All the best training schools for nurses must soon learn the lesson taught by the Waltham Training School for Nurses that a nurse must be **educated** as well as **trained**. Nurses would then be rightly called "Student Nurses" instead of "Trained Nurses."

Mercy Hospital. In the last annual announcement of Mercy Hospital is noted among other improvements the establishment and successful results of its Surgical Dressing supplies. Bundles composed of the necessary dressings and linen for various kinds of operations are prepared arranged in the order that the different articles are used in the special operative procedure, sterilized and ready for immediate use. These bundles are supplied to those who wish to operate in a private home, at a nominal price. This department has become very popular because the surgeons are fast realizing the great convenience and safety in having reliably sterilized linen and dressings on the moments notice. These bundles are supplied for the various operations, e. g. a bundle complete for an abdominal section, a bundle complete for vaginal section, or a bundle complete for an Obstetric case. This is a department which might well be established in more of the busy Hospitals to the mutual advantage of both Hospital and surgeons.

Dr. D. R. Brower leaves for Atlantic City about September 1, where he will preside at the annual meeting of the American Electro-Therapeutic Association. The Electro-Therapeutic Association was organized January 22, 1891, at the Academy of Medicine, New York City, by a number of regular physicians who were interested in the progress of electro-therapeutics. The society has held twelve annual meetings at the large medical centers in the east and west. The membership has increased and the society has done much to increase the usefulness of the science of electricity in the department of Therapeutics. Wonderful advances have been made

since radio-therapy has come into such extensive use. Exhaustive study and attention has been given this field in the last two annual meetings of this association. The X-Ray, in both its diagnostic and therapeutic capacities will receive a large share of attention in the program at the coming meeting, September 22-24.

The activity and practical usefulness of the association is evidenced by the fact that the name of some member has been more or less intimately connected with nearly every electro-therapeutical discovery or development that has transpired during the last twenty years. The association is the oldest of its kind in existence.

Our American Editors—Several of our Editorial paragraphs in this month's number of the Illinois Medical Journal are based upon correspondence which the Editor has had with the editors of prominent medical journals in the United States. The following is a list of the Editors with whom correspondence on this subject was had:

Winslow Anderson—Pacific Medical Journal.
J. C. Culbertson—Cincinnati Lancet-Clynic.
P. Maxwell Foshay—The Cleveland Medical Journal.

Frank P. Foster—The New York Medical Journal.

George N. Gould—American Medicine.
Smith Ely Jelliffe—The Medical News.
Harold N. Moyer—Medicine.
Frank P. Norbury—The Medical Fortnightly.
Francis R. Packard—The American Jr. of Medical Sciences.

Wm. Warren Potter—The Buffalo Medical Journal.

George F. Shrady—The Medical Record.
George H. Simmons—The Journal of the American Medical Association.

Frank Bird Tibbals—The Detroit Medical Journal.

The Trained Nurse. The educational supervision of the training school for nurses at the Presbyterian Hospital, is now under the control of the Faculty of Rush Medical College. The course of training has been materially changed and the general plan of instruction is similar to that outlined by Dr. Alfred Worcester founder of the splendid training school for nurses at Waltham, Mass. The leading features of the school are:

1. The minimum age requirement is twenty-one, the maximum age thirty, exceptions to this may be made at the discretion of the lady superintendent.

2. Applicants must have a high school education or its equivalent. Preference will be given to those who have had a partial or complete college course.

3. A moderate tuition fee will be charged.

4. Period of training will be three and one-half years; during the first six months the student will not enter the hospital but will devote her entire time to the following work:

a. anatomy, physiology, materia medica, bacteriology, and sanitation, (work to be pursued in the laboratory of the Rush Medical).

b. Dietetics, Practical cooking, domestic cooking, elementary nurses in the nurses home.

c. Elementary nursing in the Dispensary.

d. District nursing.

Examinations shall be held once a year.

5. The number of nurses shall be sufficient to insure health and prevent overwork.

News Notes.

AN ANNOUNCEMENT.

Dr. F. Betz, of Hulbroun, publisher and editor of "Memorabilien" announces the suspension of that journal with the close of 1902.

Dr. Guido Bell, of Indianapolis, has been the American collaborator.

Smallpox and Plague are spreading in Chili according to late reports.

Yellow Fever in Cuba. Only three cases of Yellow Fever have come into Havana this year. All from Mexican ports.

The Mosquito and Dengue. The Hawaiian Board of Health has decided that the mosquito is the cause or agent in the spread of dengue.

Dr. Isaac N. Love—By an annoying oversight in proof reading our notice of the death of Dr. Love was made to read Dr. Isaac N. Lore.

An Anti-Mosquito Plant. Capt. H. D. Large more describes in the London Times, a plant of the Niger district which attracts and stupefies mosquitoes.

The Chicago Chronicle gives the following account of election of officers at county hospital, "The epileptic staff of the county hospital elected officers."

Cause of the Pope's Death. The diagnosis of the physicians: "Catharrhal inflammation of the lung, with a haemorrhagic pleuritis was confirmed by the autopsy."

Dr. Heman Spaulding of the Department of Health of Chicago has been appointed chairman of the committee on Public Health of the American Medical Association.

Induced Sterility Warranting Refusal to Marry. Kentucky court of appeals holds that an unnecessary operation for the purpose of inducing sterility, is a valid bar to the woman's alleged cause of action for a breach of promise to marry her.

In the Chicago Tribune of July 27, appears the following: "Last night Jeffries defied his trainer and doctor by pulling off the antiphenacetine poultice that had been applied twenty-four hours before."

Distance Traveled by the Blood. The Reforma Medica states that the blood flows, with

sixty beats per minute, at a rate of seven miles per hour, this is about 61,329 miles per year, and during a lifetime of 84 years, it will have traveled 5,151,636 miles.

For the Care of Consumptives. The Commissioner of Charities of New York City has recommended an appropriation of \$400,000 to enable the health department and board of trustees of Bellevue and allied hospitals to proceed with the erection of a municipal sanitarium for consumptives.

Cancer Cured by Radium. Dr. Mackenzie Davidson of Charing Cross Hospital, London, reports a case of cancer of the nose cured by its rays. Four exposures occupying an hours time were made at intervals of several days, in six weeks the growth was gone.

Ithaca in Great Danger. It is reported by Dr. Geo. A. Loper, of New York, who was sent there by the State Board of Health to have charge of sanitary measures during the typhoid epidemic, that the city is in the same danger of an epidemic as it was during February and March.

The State Board of Medical Registration of Michigan. On account of unethical practices during his college career, the board has refused to register Dr. D. M. Coonley. He had been in the patent medicine business.

We know nothing about the merits of this case and have no reason to doubt the wisdom of the action taken. It naturally brings up the question of how long it would take to bring about a change of heart, and give a man a good record.

The Law in Michigan. The law of Michigan now reads that an application for examination must have a diploma from a legally established and reputable College of Medicine in the United States or some foreign nation, "provided such foreign nation accord a like privilege to the graduates of approved medical colleges of this state."

Government Research in Bacteriology. A report from the "Cattle Epidemic laboratory of the Department of Agriculture," states that in October, 1901, healthy cows were inoculated with human tuberculosis, that one year later they all responded to tuberculin tests, and that post mortem examination showed the lesions of tuberculosis.

An Instrument to Record the Character of the Pulse During Narcosis. An instrument has been invented by Gaertner, which enables the anaesthetist to have before him all the time a record of tension of the blood. In extreme high pressure of the blood exceptional caution is necessary and such a record is invaluable. The instrument is metallic and fastened around the wrist similar to the wrist watch.

The First Case of Appendicitis. The British Medical Journal quotes Dr. Howard Kelley, of Baltimore, who, in speaking in French before

the Societe de Chirurgie, gave the credit of the first clear description of a case of appendicitis to the French surgeon Mestevier who in 1759 reported a case in the Journal de Medecine, de Chirurgie et de Pharmacie.

Dr. W. S. Playfair, one of the best known obstetricians and gynecologists in Great Britain died Aug. 13, at St. Andrews, Scotland. His text book on obstetrics has been one of the standards of Great Britain. He was long connected with the chair of obstetric medicine in King's College. A few years ago he was mulcted \$60,000 in a law suit, and it seemed to the medical profession that justice was not done him.

National Bureau of Medicines. The joint committee appointed by the American Medical Association and the American Pharmaceutical Association to study and report on the plans of the proposed National Bureau of Medicine and Food, are said to have received word that the majority of manufacturers of proprietary medicines favor the movement. Those who oppose the movement claim that their individual reputation should be a sufficient guarantee. The object of the Bureau is to secure uniformity of standards in food and medicines.

German Medical Exhibit at the St. Louis Exposition. The Germans are planning to make an elaborate exhibit of everything connected with medical instruction, especially in respect to diagnostics and therapeutics. Prof. V. Bergmann is in charge of the matter assisted by a committee composed of Kistner, Kraus, Mikulicz, Arth, Rubner, Waldeyer, Wassemeun and others, nearly all of Berlin. A circular inviting cooperation has been sent to all prominent institutes and firms throughout Germany.

The Board of Health of State of New York is going to rigidly enforce the law regarding barber shop sanitation. The rules provide that the barber shall wash his hands with soap and hot water before attending any person; that the use of powder puffs shall be abolished; that a towel shall not be used for more than one person without being washed; sponges shall no longer be used; that instruments shall be rinsed in boiling water or some germicide after being used; alum and other astringents shall not be used except in powder; that a copy of the regulations shall be conspicuously posted in each shop.

Other State Societies.

NEW JERSEY.

It was incorrectly stated in the last issue that the New Jersey State Medical Society was organized in 1776.

The facts are New Jersey had no Medical Legislation except the law included in the enactments of the Duke of York in 1665, until the Incorporation of the New Jersey Medical Society in 1766. In 1772 the Legislature passed "An Act to regulate the practice of physic and

surgery within the colony of New Jersey. Passed September 26, 1772."

"Whereas, many ignorant and unskilful persons in Physic and Surgery, to gain a subsistence, do take upon themselves to administer Physic and practice Surgery in the colony of New Jersey, to the endangering of the lives and limbs of their patients; and many of His Majesty's subjects who have been persuaded to become their patients have been suffering thereby; for the prevention of such abuses for the future, 'Be it enacted by the Governor, council and General Assembly and it is hereby enacted by the authority of the same, that from and after the publication of this Act, no person whatsoever shall practice as a Physician or Surgeon, within this colony of New Jersey, before he shall have first been examined in Physic and Surgery, approved of, and admitted by any two of the Judges of the Supreme Court, for the time being, taking to their assistance for such examination such proper person or persons, as they in their discretion shall think fit—and if any candidate, after due examination of his learning and skill in Physic or Surgery—shall be approved and admitted to practice—the examiners shall give under their hands and seals—a testimonial of his examination.—

2. And provided always that nothing in this Act shall be construed to hinder any person or persons from bleeding, drawing teeth or giving assistance to any person for which services such persons shall not be entitled to make any charge or receive reward."

RECENT ILLINOIS CONTRIBUTORS TO CURRENT LITERATURE.

Gradle, H., Chicago, Hysterical Affections of the Eye.—Chicago Med. Record, July 15.

Doss, C. H., Pittsfield, Craniotomy.—Chicago Med. Times, Aug.

Dume, D. Winton, Du Quoin, Sciatica.—Chicago Med. Times, Aug.

Reading, Arthur H., Passiflora Incarnata.—Chi. Med. Times, Aug.

Influence of Suggestion in the Treatment of Patients.—Chicago Med. Times.

Patrick, Hugh T., Pamphlet, How Not to be Nervous.—Chicago Clinic, July.

Davis, H. W., Springfield, Electro-Therapeutics.—Chicago Med. Times, Aug.

Waugh, Wm. F., Hygiene in Summer Complaints.—Chi. Med. Record, July.

Turck, Fenton B., Experimental Gastritis, Pamphlet Review, Chicago Clinic.

Senn, Nicholas, Chicago, Medical Institutions in Madrid.—American Med., July.

Reynolds, Arthur R., Report of Streams Examination, Chemic and Bacteriological of the waters between Lake Michigan at Chicago and the Mississippi at St. Louis for the purpose of

Determining their Condition and Quality Before and After the Opening of the Drainage Canal.—Chi. Med. Record, July 15.

Shalek, Alfred, Chicago, Diseases of the Skin.—Review, Penn. Med. Jour., June.

Mix, C. L., Chicago, Physical Signs of Antinostrocrosis.—Wis. Med. Journal, July 15.

Pollock, W. J., Chicago, Broncho-pneumonia in Children.—Chicago Med. Times, Aug.

Porter, M. Milton, A Case of Bromidemia Pustulosa Tuberosa.—Wis. Med. Jour., June.

Findley, Wm., Chicago, Gynecological Diagnosis.—Review, Columbus Med. Jour., June.

Baldwin, L. Blake, Chicago, Syphilis in Dentistry.—Review, Chicago Med. Jour., July 15.

Treatment of Atony of the Stomach and Colon.—Pamphlet Review, Chicago Clinic, June.

Davis, J. B., Pontiac, Practical Points in Children's Diseases.—Chicago Med. Times, Aug.

Baum, W. L., Chicago, Iodo Nucleoid: A New Organic Iodine.—Ch. Med. Record, July 15.

Halstead, A. E., Chicago, Pancreatic Cyst: Carcinoma of the Stomach.—Chi. Med. Record, July.

Babcock, Robt. H., Chicago, Diseases of the Heart and Arterial System.—Review, Buffalo Med. Jour.

Albro, Merlin Z., Chicago, Uremia, shortcomings of certain Urinary Tests.—Ch. Med. Record, July 15.

Eckley, William T., Chicago, A Manual of Dissection and Practical Anatomy.—Review, Penn. Med. Jour., June.

Lemon, Chas. H., Chicago, The Moist Dressing in the Treatment of Compound Fracture.—Wis. Med. Jour., June.

Harris, Fred G., Chicago, Report of Treatment of Typhoid in Cook County Hospital with Acetozone.—Chi. Med. Record, July 15.

Johnston, Mary S., Chicago, Report of a Case of Elephantiasis, Due to the Filaria Sanguinis Homonis, Nocturnus.—Chi. Med. Record, July.

Lydston, G. Frank, Chicago, Briefs on Physical Training.—American Medicine, Feb. 25 to Mar. 21.

Reed, Chas. B., Chicago, The Relations between Peritoneal Adhesions and the Functioning Uterus.

Spencer, C. R., Springfield, Mongolian Imbecility with Review of 33 cases.—Pediatrics, July, 1903.

Houser, W. W., Lincoln, Surgery, the Modern and Ancient, the New and the Old, Chicago Med. Times, Aug.

Preble, Robt. B., Tabes Dorsalis, A Clinical Lecture, Delivered to the Students N. W. U. M. S.—Chicago Clinic, July.

Murphy, John B., Chicago, Report of 30 Cases of Perineal Prostatectomy, May 6, '01 to May 1, '03.—Chi. Med. Record, July 15.

Holms, R. W., Chicago, Cervical Incisions in Labor.—American Journal of Obstetrics and Diseases of Women and Children, July.

Paddock, Chas. E., Chicago, Ante Natal Rigor Mortis, Paper before the Chicago Gynecological Society.—American Gynecology, June.

Hatfield, Marcus P., Chicago, The Need of Diet Kitchens; from the President's Address to the Chicago Pediatric Society.—Chicago Clinic, June.

Goldstine, Mark T., Chicago, Treatment of Abortion, with a Description of a New Curette and Report of Cases.—Reprint from Chicago Cl., June.

Pusey, Wm. Allen, Chicago, The Practical Application of Roentgen Rays in Therapeutics and Diagnosis.—Review, Chicago Med. Jour., July.

Edwards, Arthur R., Chicago, Nephritis, its Diagnosis, Particularly of Atypical Forms, and Some Points in its Treatment.—Wis. Med. Jour., June.

Ochsner, A. J., Chicago, Essentials in Construction of Large Hospitals for Large Cities; Clinical Observation on Surgery of the Gall Bladder.

Chapman, H. W., Whitehall, A Case of Continued Development of the Foetus in Utero after Rupture of the Membranes and Escape of the Liquor Amnii.—Medical Age, July.

Patton, Jos. M., Chicago, Anaesthesia and Anaesthetics, General and Local, For Practitioners and Students of Dentistry.—Review, Wis. Med. Jour., July.

Webster, J. Clarence, Abdominal and Vaginal Caesarean Section as a Means of Accomplishing Accouchement Force.—American Jour. of Obstetrics and Diseases of Women and Children, July.

Martin, Franklin H., Chicago, Ovarian Transplantation and Reconstruction of the Fallopian Tubes, with report of the Cases and Review of Listerstein.—Chi. Med. Record, July 15.

Hektoen, L., Chicago, Paper before Wisconsin Medical Society, June 3, 4 and 5, Scientific and Practical Value of Bacteriological Examination of the Blood During Life.—Ill. Med. Jour., July.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNAECOLOGISTS.

On Tuesday, Wednesday and Thursday, September 22d, 23d and 24th, 1903 the American Association of Obstetricians and Gynaecologists will meet in Chicago. This will be the 16th annual meeting and the sessions will be held in the Northwestern University Medical School Building. Dr. Lehman H. Dunning, of Indianapolis, is President, and Dr. J. B. Murphy, of Chicago, is Chairman of the Committee of arrangements. Either of these will gladly furnish information regarding the meeting. The following is the program to be presented:

President's Address, Lehman H. Dunning, Indianapolis.

Supravaginal Amputation for Fibroids, with report of cases, H. E. Hayd, Buffalo.

Traumatic Rupture of Intestines without External Marks of Violence, with report of cases, Geo. S. Peck, Youngstown, O.

Ectopic Pregnancy, H. D. Ingraham, Buffalo.

Relationship of the Colon to Abdominal Tumors, J. F. Baldwin, Columbus.

Cysts of the Kidney, Resembling Ovarian Tumors, with cases, Rufus B. Hall, Cincinnati.

Total Extirpation of the Vagina for Carcinoma, Charles G. Cumston, Boston.

Surgery of the Female Bladder and Urethra, John B. Murphy, Chicago.

Surgery of the Ileocaecal Valve for Non-malignant Diseases, N. Stone Scott, Cleveland.

The Curette in Postpartum Infections of the Uterus, D. Tod Gilliam, Columbus.

The Use of Veratrum Viride in Surgical and Obstetrical Practice, Chas. L. Bonfield, Cincinnati.

Should the Uterus and Ovaries be Removed in Cases of Double Pyosalpinx? C. C. Frederick, Buffalo.

Placenta Praevia, E. T. Abrams, Dollar Bay.

The Limitations of Caesarean Section, E. Gustav Zinke, Cincinnati.

Further Notes on Ovarian Grafting, Robt. T. Morris, New York.

Conservative Surgical Treatment of the Uterine Annexa, A. P. Clarke, Cambridge.

The Value of Vaginal Caesarean Section, M. Stamm, Fremont, O.

Hysteria as a Result of Chronic Atrophic Parametritis; a contribution to the Study of Nervous Disturbances, W. A. Freund, Berlin.

Anaesthesia in Abdominal Surgery, J. J. Gurney Williams, Philadelphia.

The Technics of Gynaecological Work, A. Vander Veer, Albany.

Emergency Abdominal Surgery at the Patient's Home, A Demonstration, W. G. Macdonald, Albany.

Discussion of Common Causes of Death Following Pelvic and Abdominal Operations, Joseph Price, Philadelphia.

The Indications and Technics of Vaginal Drainage for Suppuration in the Pelvis, A. Goldspohn, Chicago.

Infravaginal Elongation of the Cervix, M. Rosenwaser, Cleveland.

Appendicitis, Walter P. Manton, Detroit.

Chloroform in Labor, Edwin Ricketts, Cincinnati.

Study of the Symptoms and Surgical Treatment of Intestinal Perforation in Typhoid Fever, W. D. Haggard, Nashville.

Symptomatology of the Pelvic Musculature, Hugo O. Pantzer, Indianapolis.

Palliative Treatment of Cancer of the Cervix, Walter B. Chase, Brooklyn.

Abdominal Versus Vaginal Hysterectomy in Carcinoma where the Radical Operation is Warranted, John B. Deaver, Philadelphia.

Hysterectomy in Infectious Diseases of the Uterine Appendages, H. C. Deaver, Philadelphia.

The Scope and Limitation of Myomectomy in the Treatment of Fibroid Tumors of the Uterus, L. S. McMurtry, Louisville.

Penetrating Gunshot and Stab Wounds of the Abdomen, with report of cases, John Young Brown, Sr., St. Louis.

Report of Abdominal Sections During Pregnancy, X. O. Werder, Pittsburgh.

Shortening the Round Ligaments by the Blunt Hook Method, H. W. Longyear, Detroit.

The Gilliam Operation; a Clinical Contribution, Edw. J. Ill, Newark.

Report of a Fourth Consecutive Successful Operation for Acute Perforated Gastric Ulcer, with General Infection of the Peritoneal Cavity, Henry Howitt, Guelph, Ont.

During the session Dr. Macdonald will give a demonstration of Emergency Surgery at the Patient's Home, in which he will show in detail the operator, assistant and equipment. Dr. Murphy will also hold a clinic. We understand that all members of medical profession are invited to attend the sessions of this Society.

Local Societies.

Northwest Branch of the Chicago Medical Society. Louis J. Pritzker, secretary, requests the members of this Society to send in the titles of their various scientific papers they propose to read during the coming monthly meetings at as early a date as possible in order to enable him to arrange in an orderly way.

Calhoun County Medical Society. Our Society only meets two times a year. Our next meeting will be Sept. 21, 1903. We have had only one case of smallpox reported in the county this year; that was at Kampsville—four cases in one family. There has been less sickness this season than last, notwithstanding the high water. There is reported some typhoid fever throughout the county. No heat prostrations or sunstrokes reported this year.

T. O. Hardesty, Official Reporter.

The Hamilton County Medical Society met Tuesday, July 21, in regular session. A constitution and by-laws in accord with the national reorganization and a fee bill were adopted by the Society. This occupied so much time that

no other business was transacted, and the Society adjourned to meet on the Second Tuesday in October.

C. M. Lyon,
Official Reporter.

The Warren County Society meets in May and November, consequently we have no report at this time and there isn't anything in the way of news to report at this time. There is so little sickness in our midst that the profession has taken up flower culture, and one has saved enough money in twenty years of careful economy to buy two cows and start an embryo dairy, and he doesn't pasturize his milk, either. A relative pastures the cows. Not one of our professional brethren is ailing physically. If such was the case the rest of us would try to see to it that the health board would have a record to make.

W. H. Wells,
Official Reporter.

The Decatur Medical Society held its regular monthly meeting in the Decatur Club rooms July 28, 1903. Dr. Everett J. Brown read an excellent paper on "Multiple Sclerosis," in which he described three cases occurring recently in his own practice. One of the cases was presented before the Society. The paper elicited a spirited discussion. Dr. Lewis H. Clark of Decatur was elected to membership. Eighty-four per cent of the members of this Society have affiliated with the State National organization. There have been very few cases of contagious disease reported to the local board of health for two months. Typhoid has not appeared to any extent although a few cases have been imported. The greater number of cases are intestinal disorders and diseases incident to sudden changes of temperature.

Lynn M. Barnes, Official Reporter.

The Fayette County Medical Society held its quarterly meeting in Vandalia July 8th. F. M. Entrekin of Vandalia read a paper on **Prevention of Communicable Diseases.** C. U. Collins of Peoria read a very interesting paper on "Inguinal Hernia." F. Buckmaster of Altamont read an instructive paper on "Subcutaneous Tuberculosis of the Skin." F. Buckmaster of Altamont and J. N. Thrash of Beecher City were admitted as members. A number of visiting physicians from adjoining counties were present, and the meeting was by far the most interesting one ever held by the Society.

Asa L. T. Williams,
Official Reporter.

The Pulaski County Medical Society held its third quarterly meeting at Mound City Tuesday, July 7th. The following members were present: J. F. Hargan, Hall Whitaker, B. F. Crabtree, L. M. Winsted, B. F. Brown, W. J. Whitaker, C. J. Baswell and A. W. Tarr.

The following papers were read and discussed by all present: Acute Follicular Tonsillitis, by W. J. Whitaker; Antiseptic Surgery, by C. J. Boswell; Convulsions in Children, by M. L. Winsted. R. M. Fulkerson of Beechwood was elected to membership. The next meeting will be held at Mound City on Tuesday, Oct. 6, 1903.

A. W. Tarr, Official Reporter.

The Southwestern Medical Society (branch of Chicago Medical Society) is the only one of the various Societies in the city that has held meetings regularly through the summer months.

At our June meeting it was voted to change our meeting night to the first Tuesday eve of each month, instead of the second.

At our July meeting F. R. Green read a paper on **Alcoholic Gastritis**, which was a treat.

Dr. Green claims that the moral support the physician can command over a case of alcoholism is of the very greatest value in handling them, and therefore is strongly against sending them away to the various cures and hospitals, etc.

At our August meeting an extemporaneous discussion on **Puerpeal Eclampsia** took the place of a regularly prepared paper, and proved to be a very satisfactory and instructive meeting.

The annual election of officers takes place at our meeting in Sept. 1, Tuesday evening at 9 o'clock at 540-542 W. Sixty-third street.

Thos. C. McGonagle,
Official Reporter.

The Scott County Medical Society met at Court House August 18 and was called to order by the President, Dr. James Miner, at two p. m. After the reading and approval of minutes of last meeting the program consisted of a paper by Dr. G. C. Brengle on the subject of **Scarlatina**. The doctor showed he had spent time and taken pains in his preparation and presented a concise and interesting essay.

An interest was manifested by all present taking part in the discussion that followed.

Our membership is small and an essayist is not greeted by a large audience but usually an appreciative one.

Our Society has not recently failed to hold its regular monthly meetings and have a good program but it is principally through the efforts and energy of our president that it has succeeded.

J. P. Campbell,
Official Reporter.

Adams County Medical Society. The regular monthly meeting of the Adams County Medical Society was called to order at the Chamber of Commerce in Quincy, August 10, 1903.

Members present: A. H. Byers, M. C. K. Germann, T. B. Knox, F. E. Nich, H. J. Nichols, L. H. A. Nickerson, C. W. Pfeiffer, Jos. Robbins, Wm. Sigsbee, W. W. Williams and John A. Koch.

M. C. K. Germann read an essay on "**Some Malformations of the New Born.**"

The following is the doctor's paper:

The purpose of this paper is to call your attention very briefly to certain malformations of the new born relatively rare but still interesting to the obstetrician, general practitioner and also the surgeon.

There malformations are caused in a large measure by lack of normal intrauterine development. A stage of development which is normal at a certain period of intrauterine life becomes abnormal if it persists to a later period, and this persistence of an early stage of de-

velopment constitutes in the great majority of cases what is known as Congenital Malformation. Such a failure of development may be the result of intrauterine inflammation, which either by crippling the various functions or by arresting the normal intrauterine growth produces a condition of disease at birth. Inheritance certainly is a very important element in influencing the tendency to disease and vitiating the tissues making them more receptive to abnormal conditions, and stunting their normal development. Such diseases as tuberculosis, rheumatism, syphilis and the various neuroses, being present in parents will produce in their offspring various congenital defects.

Maternal impressions are thought by some to be causative factors in producing a physical or mental defect in a child. Some evidence has been produced showing that a violent mental impression made upon a woman who is at the time carrying a child, was followed by some malformation bearing a striking relation in character to the impression made upon the mother. These instances are, however, not sufficient proof, for there are, too, a number of instances where severe mental impressions were made upon a mother when the foetus was in a certain stage of intrauterine development, and still the offspring was healthy and perfect.

Further investigation on this obscure subject will be necessary to decide this, although I believe it justifiable to guard women during their pregnancy from all unpleasant impressions with more care than we do at present.

I will briefly cite the history of a family where various congenital defects were present. Both parents in this instance as far as known are healthy, except the father, who has a tendency to rheumatism. Mrs. M. gave birth to a healthy, perfect, female child July 24, 1896. December 20, 1897, another female child was born, which was imperfectly developed, she having a partial anencephalia. She lived only a few minutes. There was a deficiency of the skull structure, parts of the occipital, as well as parietal bones were missing. The rudimentary cerebrum enclosed in its membranes protruded through an opening extending from the frontal bone anteriorly to the partially formed occipital bone posteriorly with rudimentary parietal bones laterally. There were no anterior nor posterior fontanelles, otherwise the child appeared normal. The third child, also a girl, born January 3, 1899, was normal in every respect. The fourth child, a boy, born, April 12, 1901, seemed well in all respects, save a phimosis, which was at once relieved by circumcision. The fifth child, a girl, born July 12, 1903, has a spina bifida, talipes varus, paraplegia, as well as vesical, and rectal paralysis. The spina bifida is situated in the dorsal lumbar region, the hernia being about the size of a medium orange. It has a raw florid appearance, the skin being entirely absent, and the tumor covered with a thin translucent membrane. The fluid within seems to communicate with the cerebrum. Some fluid has escaped through a small perforation in the ulcerating surface, but up to the present time, no convulsions have appeared, the child cries a great deal, and is not so well nourished as when born.

Up to the present time the treatment consists in keeping the ulcerating surface aseptic, and applying slight pressure over the tumor, by means of a bandage. The tumor, when last seen seemed some smaller and somewhat shriveled. Now, in this family of five children, three were more or less malformed. The parents apparently healthy. The mother does not remember any time having received any severe mental shock. The hygienic surroundings of this family are very good, and the mother is well nourished. A physician is often asked what causes these congenital malformations. I should like to hear the opinion of the Society.

In the discussion that followed the opinion was that syphilis, strenuous life, mal-nutrition, bad social and hygienic surroundings on part of the parents were the causative factors.

Jos. Robblins reported a case of "Katonla."

L. H. A. Nickerson reported "**A case of insanity produced by surgical shock.**" An attempt at suicide cured the condition of insanity.

John A. Koch,
Official Reporter.

Rock Island County Medical Society.

The regular bi-monthly meeting of the Rock Island County Medical Society was held at the new Manufacturer's Hotel, Moline, on Tuesday evening, August 11th. About thirty members of the society were present, as were a number of the profession from Davenport, Ia.

The secretary was instructed to remit to the treasurer of the State Medical Society the annual dues for all members of the County Society who had paid their dues for the current year.

The programme for the meeting consisted of an address by Dr. Fernand Henrotin on Pelvic Inflammation. Dr. Henrotin's address was largely devoted to the differential diagnosis of Pelvic Inflammation due to Puerperal or Traumatic etiology and that of Gonorrheal origin. His inimitable and forceful manner of stating his points of argument was highly enjoyed and appreciated by his auditors, who generally felt that they had learned many new points on the important subject from the speaker's instructive address.

The subject was discussed by Drs. Hollowbush, Eyster, Sala, Edlen, Beal and Ludewig of the Society, and Lambach and Crawford of Davenport.

After the close of the meeting the Society partook of a supper served in the dining room of the hotel, and spent a very delightful hour in social intercourse.

G. L. Eyster,
Official Reporter.

Macoupin County Medical Society. The State Board of Health is about to publish an official list of the doctors in the State of Illinois, and credits Macoupin county with seventy-five members.

J. P. Denby and Miss Helen Burke were united in marriage at the Episcopal church in Carlinville on July 22, 1903. While they are in

New York on their bridal trip the Doctor is taking a post-graduate course in the hospitals.

F. C. Barto of Plainview has had an acute attack of gastro enteritis and became so alarmed that his professional brethren were called to consult over his condition.

The program of our next regular meeting to be held in Carlinville on the 20th of October is a continuation of the essayists, Drs. Wash, Nifong and E. A. Bleuler. The subject of Dr. Wash's paper is "The Treatment of Diphtheria."

We expect the fall meeting to be largely attended because of the good roads and favorable weather.

Our members have responded promptly to the call for dues to the State Medical Society.

Bunker Hill has a sensational murder trial in the courts, where Mrs. Guller is held on circumstantial evidence; that the victim, Master Checksfield, accused her of giving him bitter candy to eat. The boy died in an hour with violent tetanic spasms. Dr. Bley, the attending physician, removed the stomach and took it to the chemist of Washington University. The results of the examination for strychnine in the stomach contents may decide the woman's fate.

J. Palmer Matthews,
Official Reporter.

Jasper County Medical Society. The physicians of Jasper County met at Newton, Friday, August 28, 1903, for the purpose of organizing a medical society.

Those present from this county: H. A. Eldson, H. S. Hinman, S. P. Berns, E. H. Horner, J. P. Prestly, W. E. Franke and E. E. Burton. C. Barlow, Councilor for the Illinois State Medical Society and H. N. Rafferty, Secretary of the Crawford County Medical Society, Robinson.

Temporary organization was effected as follows: C. Barlow was elected chairman and E. E. Burton, Secretary.

Discussion was held as to the need and object of a society by those present. Owing to the limited number present it was decided to hold another meeting at Newton, Friday, Sept. 25, 1903, at 3 p. m. to effect a permanent organization. H. S. Hinman, J. P. Prestly and E. H. Horner were appointed committee to draft constitution and by-laws to govern the society. Papers on topics, in which physicians are interested at this time of the year, will be presented by H. S. Hinman and H. A. Eldson, after which they will be discussed by those present.

The outlook is favorable for a good meeting which we hope will materialize, as we feel the need of a good live society in Jasper county.

E. E. Burton,
Official Reporter.

Lake County Medical Society. At the last meeting of the Society two interesting papers were presented. One by L. H. Tombaugh of Waukegan upon "**Erythema**," and the other by W. C. Bouton of Waukegan upon "**Diphtheria**." The Society elected the following officers for the ensuing year:

President—L. H. Tombaugh, Waukegan.
Vice-President—W. C. Bouton, Waukegan.

Secretary and Treasurer—A. C. Haven, Lake Forest.

The following were assigned papers for the next meeting in September: N. J. Roberts, "Gingivitis;" Elva Wright, "Cholera Infantum;" F. C. Knight, "Emergency Surgery;" H. O. E. Young, "Appendicitis."

Work is under way for the new \$20,000 hospital in Waukegan, the gift complete of a benevolent Waukegan lady. Waukegan is a city of 10,000 people, and the center of many manufacturing establishments. The hospital is greatly needed and will undoubtedly be greatly appreciated.

Lake Forest Hospital, "Alice Home," has just completed its fourth year and is almost self-sustaining. It has what few hospitals can boast, a balance to its credit, so the treasurer reports. The isolation wing of the hospital has been entirely renovated, fire places placed in the rooms, and they are to be entirely refurnished and converted into a "lying-in" ward. These will consist of two rooms, with two beds each, a large bath room and a small obstetric operating room. An incubator will also be added. An architect is also drawing plans for a new isolation hospital to be located on different grounds. Alice Home is on the grounds of Lake Forest University, and it seemed wise to remove the **Isolation Hospital** to other grounds. Four hundred cases have been received into Alice Home since its opening four years ago.

The Lake Forest horse show contributed \$1,000 towards the new Isolation Hospital.

The epidemic of scarlet fever in Lake Forest cost the city \$3,500, \$500 of which was defrayed by Lake county and \$500 more collected from patients in the auxiliary hospital.

The last case appeared April 15th and the city now has more summer visitors than ever before, despite the dire predictions of some pessimistic medical men that the epidemic would continue all summer and the city be deserted.

A golf tournament for medical men will be held at the Onwentsia some time in September.

An organization of medical golf players has been perfected, with Geo. F. Fiske of Chicago as president.

A. C. Haven,
Official Reporter.

Report of the Monthly Meeting of the Quincy Medical and Library Association, Held Thursday, August 13, 1903. The Society convened in the Quincy Public Library, the president, Jos. Robbins, in the chair. Present—W. W. Williams, R. J. Christie, Jr.; J. A. Koch, Montgomery and Robbins. The minutes of the last regular meeting were read and approved. The librarian in his report said that the following journals and books were held in duplicate and should be exchanged with other libraries not owning them:

American Journal of the Medical Sciences, 20 years, unbound, as follows: 1868, 1871, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1890, 1891, 1892, 1893, 1894, 1895, 1896.

American Journal of the Medical Sciences, 17 years, bound volumes, as follows: 1867, 1868, 1869, 1870, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883.

Medical news unbound, for the following years: 1882, 1883, 1884, 1885, 1886, 1887, 1895, 1897.

Bound volumes of the same journal, two copies each for 1882-3-4.

Ziensen's Cyclopaedia of Medicine. Set complete, except volume 10.

Medical and Surgical Reporter, 1869 to 1888 inclusive, unbound.

There being no regular essayist for the evening, Drs. Christie, Jr., and Montgomery made reports of some cases of united fractures coming under their observation. Dr. Montgomery gave some instances of very remarkable medical certificates which had come under his notice, the following having been given by a man licensed to practice medicine in Quincy under the old law. It is given verbatim et literatim, as follows:

Quincy Ills Apr 6th 1901

this is to certify that George Conklin has Serious trobel with his hart and brane he has Dropsy of hart & chronic derangement of the liver his blood is in terabel cheafus condition which causes a rush of blood over the brane which causes those fits or spasms his hart is in a drownding condition and cant force the blood through the system as it should and causes a rush of blood over the brane & the hart is in a drownding condition and is liabel to stop at any time and of corse he would drop Dead and time he drops down he is liable Drop dead he allways falls back instead of forward which shoes thare is a greater rush of blood over cerebellm thinder or little brane then thare is over cerebelim or frontel brane and makes it more serious the only treatment in such cases to effect a perment cure is renovate and regulate the hol systum by getting the surplus water out of the hol susptum and get it filled up with good healthy blood which removes all troubel of every kind when you have plenty of good healthy blood.

The librarian was authorized to employ help to enable him to get the Medical Library in good working shape and to store the duplicates. On motion the Society adjourned.

E. B. Montgomery, M. D.,
Secretary Pro Tem.

East St. Louis Medical Society. The Society is now on its summer vacation, the last meeting being in June.

There have been several recent additions to the local profession, so that there are now eighty doctors in East St. Louis.

The health of the city is fair, there being no epidemic of any kind, though enteritis and entero-colitis are quite prevalent. The local condition is far better than was believed possible during and immediately after the flood.

The selection of Dr. H. C. Fairbrother as councillor for this district was a most excellent one. Dr. Fairbrother is an earnest advocate of

organization and will do more to unite the medical interests of this section than any other man here.

J. L. Wiggins and wife are in California, where they expect to spend a month or two to regain health and vigor.

R. L. Campbell has returned from a trip to his old home, Buffalo, N. Y.

I append a brief abstract of the proceedings of the last meeting of the Society:

The East St. Louis Medical Society met in regular session on June 1, 1903, C. W. Lillie, chairman pro tem, and members Wiggins, McLean, Adams, Nifong, Hagarty, Campbell and Armstrong of Centralia, a guest.

J. L. Wiggins presented a pathological specimen of unusual interest, being a portion of intestine about four inches in length with four openings, made by one bullet. In the specimen, which was shrunk and hardened by the preserving fluid, it could be seen that the missile had passed through both walls of the gut and into another fold in contact with the first in almost the same position as related to the mesentery, thus making four openings within a space of four inches.

Dr. Wiggins reported the man did not die from shock, nor from peritonitis, nor from hemorrhage, but from a toxemia resulting from the decomposition of the contents of the stomach, there being about one and a half pints of partly digested and decomposed food substances in that organ at autopsy.

At the post-mortem it was found that the field of operation was in perfect condition, and believes that had the contents of the stomach been removed by a siphon his patient might have lived. That emptying the stomach would obviate the danger of paresis of the bowels from absorption of the products of decomposing food. Thinks it would have been well to siphon off contents of McKinley's stomach.

In this case free drainage with gauze was made. The abdominal cavity was flushed with normal saline solution.

Dr. Wiggins thinks it safer to leave some free blood in the abdominal cavity than to manipulate or sponge the intestines too much to get rid of blood that is difficult to reach.

Dr. Campbell reported a case of gunshot injury operated on in City Hospital, St. Louis, where twenty-two perforations were closed and eight inches of gut resected. The patient is still living.

Dr. Lillie thinks that the fact that Dr. Wiggins' patient did not die of shock or peritonitis, or hemorrhage, should be ground for study as to the real cause of death in gunshot injuries, when patients die of conditions similar to those causing the death of Dr. Wiggins' patient.

Dr. Lillie refers to a paper he heard and discussed on this subject in which the author termed such a condition "medical shock." Dr. Lillie thinks many die of gunshot injuries from this condition, but objects to this name, "medical shock."

Other members of the Society mentioned cases of gunshot injuries, and gave interesting data of these cases.

C. W. Lillie,
Official Reporter.

Marriages, Deaths and Changes of Address.

Marriages.

Jaques Holinger to Miss Cora Follen, both of Chicago, July 29.

Elizabeth Janet Child, M. D., Bethel, Vt., to Dr. Daniel Freeman, of Chicago, August 6.

Deaths.

John J. Taylor, for many years secretary of the LaSalle County Medical Society, and once president of the North Central Illinois Medical Association, died at his home in Streator, Ill., Aug. 3, from cancer of the stomach.

Marcella C. Baldwin, Woman's College, Chicago, 1882, of Rockford, Ill., died from tuberculosis at St. Anthony's Hospital, Rockford, July 7, after an illness of 8 years, aged 45.

Arthur E. McBride, Louisville, '83, member of Illinois State Medical Society, Central Illinois Medical Society and Whiteside County Medical Society, died in Sterling, Ill., June 12, aged 42.

Changes to Chicago.

Bentley, R., from Joliet to 2843 Wentworth ave.

Changes from Chicago.

Ohlmacher, A. P., from 2435 Dearborn st., to Gallipolis, Ohio.

Seapy, John A., from 1454 Ogden ave. to Geddes, S. Dak.

Changes from Illinois.

Abrams, Daniel O., from Decatur to Independence, Mo.

Burten, E. P., from Oak Park to Tucson, Ariz.

Decker, A. V., from Colchester to Peckham, Okla.

Kahn, Chas., from Joliet to Jefferson, Okla.

Changes in Illinois.

Blair, David A., from Abingdon to Ellisville.

Brunk, Thos. L., from Dixon to Aurora.

Manley, Paul G., from Mt. Carroll to Mt. Carmel.

Peterson, Verne A., from Hampton to Arlington.

Talbott, C. W., from Flanagan to Secor.

Changes in Chicago.

Beardsley, Jennie A., 6305 Normal ave., to 6506 Peoria st.

Caspers, P., 2258 Indiana ave., to Wychmere Hotel, 18th and Indiana ave.

Chapman, Geo. L., 902 Wilson ave., to 905 Wilson ave.

Coulter, J. H., 103 State st., to 907 Association Bldg.

Dolan, A. N. J., 905 Wilson ave., to 853 Wilson ave.

Hollenbeck, F. D., 205 N. State st., to 183 Rush st.

Krieger, G. E., 8947 Exchange ave., to 9140 Commercial ave.

Phifer, C. H., 4147 Lake ave., to 3658 Wentworth ave.

Roler, A. H., 2220 Indiana ave., to 4729 Lake ave.

Spring, Carrie K., 2378 N. 42d st., to 5955 Prairie ave.

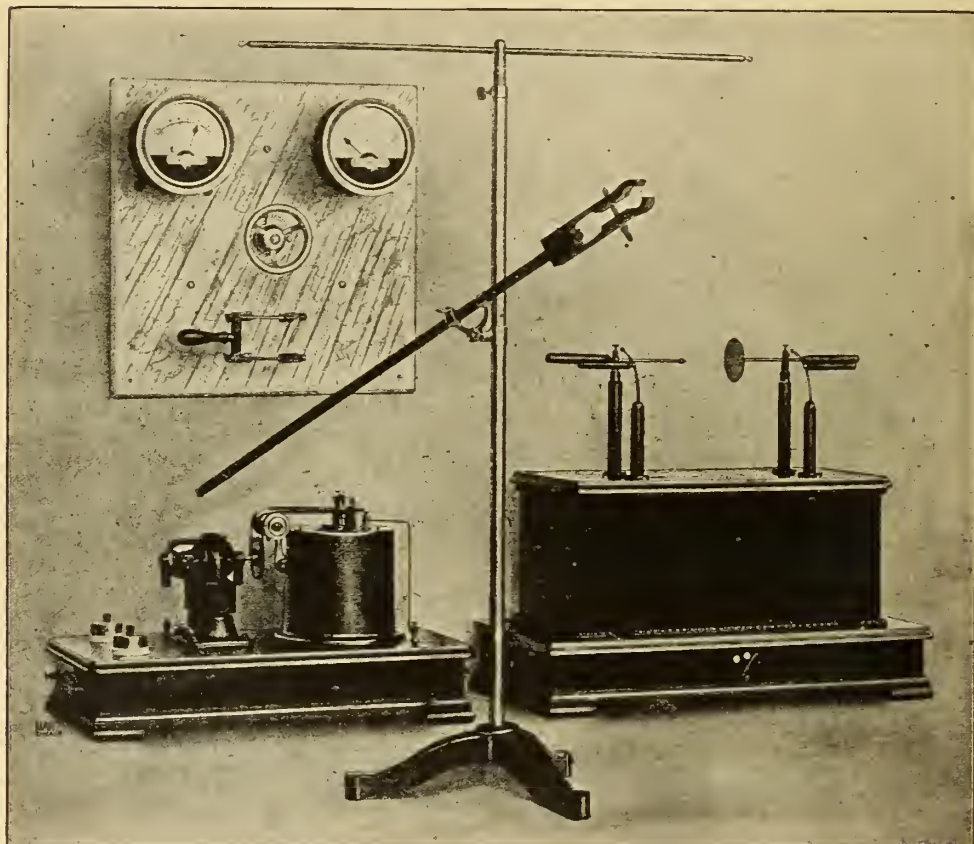
Turck, Fenton B., 362 Dearborn ave., to 151 Rush st.

Walker, W. H., 527 64th st., to 6335 Greenwood ave.

Williams, John C., 100 The Plaza, to 631 Fullerton ave.

WHY NOT ENLIGHTEN YOURSELF

BY THE AID OF THE
WESTERN X RAY COIL



The only coil that will work equally as well on the alternating as on the direct current. For fluoroscopic, skiagraphic and therapeutic treatments it cannot be beat, and with a special Geisler tube we can produce the violet rays, also the induced current as produced by static machines.

Write us and we will gladly give you complete details in reference to this wonderful instrument.

WESTERN X RAY AND COIL CO.,

28-30 WEST RANDOLPH STREET, CHICAGO.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 5. }

Springfield, Ill., October, 1903.

{ SUBSCRIPTION
\$3.00 A YEAR. }

WHAT SHALL WE DO IN CASES OF SEVERE SPINAL INJURY?*

BY E. MAMMEN, M. D., BLOOMINGTON.

Injuries to the cerebro-spinal axis are of such serious character and present such an array of perplexing problems that a presentation of this subject and its discussion should not be without profit at this time.

Involving as most of these injuries do, the spinal cord, the sympathetic ganglia adjacent to the spinal column, and through these most of the internal organs as well as the muscular system, they present symptom complexes as well as conditions with which to deal requires the exercise of the most careful judgment.

It is not the purpose of this paper to present a scientific study of symptoms, nor to classify in statistical order a large number of cases. That has been ably done by a number of writers, and by Drs. Norbury and Black last year. The present purpose is to present a few principles in point, to provoke further discussion on this very important subject, and to urge an abandonment as far as possible of the policy of non-interference with these injuries as now practiced in many quarters.

Permit me to present a few cases and to point out the lessons which they teach.

S. T., a farmer, while in a stooping position, was stabbed in the back with a pocket knife, the blade of which was narrow and about three and a quarter inches long. It penetrated the laminae of the sixth and seventh dorsal vertebrae a little to the right of the spinous process, apparently in an upward forward and inward direction. I saw him about an hour afterward and found him unable to rise. There was apparently complete paralysis of both lower extremities. Examination revealed the clothing of his back well saturated with blood, which flowed freely from a wound about three-fourths of an inch in length situated as before stated and con-

stituting a clean lateral cut. Paralysis of motion and sensation was complete in the left lower extremity, while the right had no power of motion, but sensation remained complete.

The left inguinal region was hyper-aesthetic and had the sensation as if a sinapism had been thoroughly applied. There was nausea and some vomiting, paralysis of both bladder and rectum. Heart action and respiratory movements were both accelerated and irregular. Pupils were unequally dilated, the right smaller than the left and the patient complained of a peculiar vertigo.

The man was carefully put to bed, the wound covered with sterilized cotton but otherwise let alone in the hope that the flow of blood had rendered it aseptic. The character of the healing process proved this to be the case.

A few hours after the injury a plaster jacket was snugly applied, the spine being meanwhile placed in careful extension by partially suspending the patient from the head. Absolute rest in bed with attention to urine and bowels constituted virtually the entire plan of treatment. In five weeks motion was partially restored in the right lower extremity, in five weeks more, motion was partial also in the left, while sensation was still absent. Pupils were still unequal, but control over bowels and bladder had been restored. When the plaster jacket was removed the wound was healed by first intention. Some months later the patient was able to walk, but did not have perfect control of the left extremity. The hyperaesthetic area had vanished.

Measurement showed that the left extremity was on an average one inch greater in circumference than the right. Sensation had not returned. The foot was at one time severely burned when it was warmed in company with its fellow.

Prior to the injury the patient was a robust muscular man, but at this time he had become a confirmed hypochondriac and his

*Read at 53d Annual Meeting, Chicago, May 30, 1903

physical vigor had disappeared. This is evidently a case in which the columns of the cord both posterior and anterior had been partially divided and in which their fibers became to a great extent reunited, the motor fibers more perfectly than the sensory, aided by perfect immobilization, rest and the aseptic condition of the wound.

2. W. M., a brakeman, was thrown from a freight car when passing under a low bridge. He was precipitated to the ground, but his injuries did not at first appear to be of a very serious nature. He was confined to his room only about two weeks. However, during this time he complained of general soreness, and there was retention of urine, tingling numbness in both lower extremities. These symptoms abated in a short time and he was able to go about. However his neck remained stiff. Gradually contraction and spasm of the muscles of the left side of the neck appeared, with a marked degree of torticollis. His attending surgeon told him that this was due to rheumatic affection, and that it would soon subside. No thorough examination was made.

The neck became no better. The patient came under my observation about three months after the accident. By that time he had been under the care of three surgeons, one of whom had given him a certificate stating that he was suffering from torticollis of rheumatic origin. This certificate was indorsed by the second who treated him. Examination revealed right posterior aspect of the neck swollen, red and tender, and elevated in temperature, while the head was rotated and bent markedly to the left side. Careful movements and palpation demonstrated a soft crepitus over the fourth and fifth cervical spines and processes. A colleague examined the case with me and confirmed the diagnosis of un-united fracture and displacement of some part of the vertebral arches or processes. Treatment by extension and immobilization was advised, and was carried out. The patient was put to bed with the head between sandbags for two weeks, then a jury-mast was applied with a plaster jacket and worn for about eight weeks, when the swelling and pain had subsided.

The plaster jacket was then abandoned. He was advised to wear the jury-mast for some time longer, and was in fact entirely cured of his trouble.

An interesting sequel to this case is, that after recovering one thousand dollars from a railroad brotherhood for permanent disability as a brakeman, he brought suit against the company which had employed him, for \$20,000 damages. Apparently to cultivate sympathy he wore the jury-mast for more than a year and a half, exhibiting himself meanwhile at county fairs and shows as "the man with the broken neck." His suit was tried three times and finally the Supreme Court of the State of Illinois sustained a verdict of seven thousand dollars and interest. Had he been properly examined and cared for in the beginning, all the expense and damage to the road might have been avoided.

3. H. J., restaurant keeper, was watching workmen take a rod out of a well. While stooping over to examine a part of the material from the well, a heavy piece of iron fell from the derrick striking him over the lower dorsal region. Complete paraplegia immediately ensued. It was evident that a fracture of some portion of the dorsal arches had occurred. A casual examination was made by a physician, but nothing was done. A surgeon was then summoned from a neighboring town, but he also did not advise active measures. Hence the patient was allowed to lie in bed without other attention than that required to relieve the bladder and rectum. The functions of these gradually improved. When I saw him several weeks later he was in a fairly comfortable condition. Paraplegia remained complete but there was good control over the urine. The case appealed so strongly to my belief that the cord was compressed only, and that relief by means of laminectomy might still be possible that I advised this course. The patient and his friends readily consented and they decided to bring him to the hospital in a few days. Meanwhile my visit had been made known in the town where he lived and a local osteopath persuaded the friends to take the patient to Kirksville, Mo., where he was to be

cured without an operation. He died in Kirksville within a few weeks after his removal. Had operation been resorted to this might have been also too late, but if immediately performed this would have been apparently a favorable case for recovery. According to Johnson, Jour. Am. Med. Assn., April, 1900, recovery is still possible three months after injury. He reports a case of a removal of a mass of cicatricial tissue from the dura three months after injury, when rapid recovery ensued.

4. J. W., a carpenter, fell head downward through a window into the basement of a house he was constructing, and fractured the arches of the fourth and fifth cervical vertebrae with resultant paralysis of all parts supplied by the cord below. Three weeks after the accident his physician asked me as to the proper course to pursue. So far no radical treatment had been attempted.

The doctor desired to have me see the patient but waited three weeks longer before I was called. I found the patient in bad shape. There was the odor of ammoniacal urine which dribbled away. Bedsores existed all along the spine. He was greatly emaciated but in good spirits. He very much desired an operation although there was little to encourage the attempt. There was distinct depression over the back of the neck and it was certainly a source of regret that an operation had not been attempted at the time of the injury.

Operation disclosed that the fracture of the arches had produced simple pressure upon the cord, which was easily removed. The patient rallied nicely.

In a few days some degree of motion began to appear in his lower extremities, proving the possibilities of this case had an operation been performed sooner. There was primary union of the wound, but the patient succumbed to a progressing pyelo-nephritis about ten days afterward.

These with other instances, similar accidents observed in the practice of others and which are of frequent occurrence, which could be cited, have led to the conclusion that many men in our profession are exceedingly slow or disinclined to institute active

measures in cases of injury to the spinal cord or column. It would seem that some discussion is needful to spur men to active skillful and effective measures when life is imperiled by these serious injuries and can evidently be prolonged in some instances at least, and the individual restored to a degree of health. In fact time is an essential element in the attainment of success. With increasingly exact knowledge of the interpretation of symptoms, with better technique, always with the exercise of good judgment the profession should strongly advise, in some cases urge consent to those measures, whose value the laity can only learn by their effective demonstration. There is no more reason why we should procrastinate in the performance of laminectomy in the presence of pressure upon the cord, than that we should hesitate to trephine for fracture of the skull. If such hesitation is the result of timidity, then counsel should at once be sought. The general practitioner should be willing to concede that this is the field of his specialist friend, the surgeon. It will increase confidence in his ability and good judgment, when in such a case he says; call counsel, call a surgeon.

By active, immediate and judicious measures a life may now and then be saved. No surgeon should hesitate to perform laminectomy when it is indicated. Such indication may exist much more frequently than has been supposed. If laminectomy is to be performed, then it should be done as soon as the symptoms and displacements of the case can be clearly defined, and as soon as shock has subsided. If accessible the X ray may be used to demonstrate position of the fragments of the arch or bodies. Only those cases in which complete separation of the cord exists should be relegated to the hopeless class, but others thought to be hopeless will be found in the class where prompt interference will bring surprising results. The columns and fibres of the cord when once destroyed are probably not regenerated, but operation may be necessary to determine this point.

The operation of laminectomy should be performed over the exact site of the injury,

the incision extending upward rather than downward from this point, and should extend between the spinous and transverse processes so as to reach over not less than three or four vertebrae, and is made to pass well down to the bone. The spinous processes of these vertebrae may now be divided close to their roots so as to furnish ample opportunity for spreading the margins of the wound by means of a pair of strong retractors, the divided ends of the spinous processes remaining attached to the muscular structure to be replaced as nearly as possible in their normal relations when the operation is finished. The rounded beak of a strong pair of laminectomy shears is now inserted beneath the lowest lamina included in the operation and division made from below upward of not less than three of them. These may be then carefully drawn over so as to expose the dura spinalis fully and clearly to view. This will be easy in the dorsal region, but more difficult in the cervical. Any fragment or spiculae of bone which may have penetrated the cord should now be sought for and carefully removed. The dura should be carefully slit up with small scissors and all clots removed from the subdural space. The extent of injury to the cord itself can now be accurately determined. If displaced it may be gently restored as nearly as possible to its normal position, if lacerated, efforts to restore will be of little avail. The wound should now be closed and all the parts placed in as nearly normal relations as possible, a small drain of gauze being left to project from the lower angle. If there has been extensive injury an immobilizing apparatus or plaster jacket should be applied. The drain may be removed through a fenestrum left in the jacket. The patient himself should be as nearly as possible immobilized in his bed.

This description briefly outlines the salient points in the performance of this operation. Andrew J. McCosh in the *Journal of the Am. Med. Assn.* reports six operations of whom two recovered, four died. He discusses the subject from a standpoint favoring laminectomy. J. C. Munroe in the same journal reports eighteen cases of operation with quite a proportion of successes. He advocates operation even though the case is

nearly hopeless because it offers the only hope for the patient. These cases well illustrate the varying characteristics of this class of injuries, in fact each presents its own peculiar aspects. Still it is possible to formulate certain principles which may help to a conclusion in any given case.

1. In those injuries where no fracture or dislocation has occurred but where a degree of paralysis exists, rest, absolute and physiological is of prime importance.

2. In fractures or dislocations, as in fractures elsewhere, attempt should be made to restore the parts to their normal position by manipulation, extension, or if need be by operation.

3. After injury or operation the spinal column should be held firmly in position by a proper immobilizing apparatus, juremast, jacket, splint or brace, or a combination of these.

4. Where pressure exists from depression of the arch or haematomyelia laminectomy should be resorted to at the earliest possible moment.

Promulgate throughout the profession the dictum of Sir Ashley Cooper, "If you could save one life in ten, aye, if you could save one life in a hundred by such an operation, it is your duty to attempt it."

Discussion.

Edward H. Ochsner, Chicago: Mr. Chairman.—The essayist has called attention to one point which is of great importance. I understood him to say that when there is a rupture of the spinal cord operation is futile. As a rule, the diagnosis can be made. If the patient is intelligent, and if the friends, at the time of the examination of the patient, are seen, one can usually tell whether rupture of the cord has occurred or not, and if we are positive it has, operation would not only be futile, but would give additional pain and suffering to the patient. If the patient is intelligent, and was not stunned by the injury, did not lose consciousness, with a loss of motion below the seat of injury immediately following the injury, it is proof positive that the cord is ruptured, and so far as I know, there is absolutely no authentic case on record which has been relieved by operation when there was such a history. There is one reported, but there is some doubt about it.

There is one other point I would like to call attention to, and it is, that Goldthwaite, of Boston, has given us a little device which is extremely useful in all forms of spinal injury and spinal disease, either acute or chronic. Goldthwaite has devised a frame for the purpose of treating tuberculosis of the spine, and

I have found this same frame of great help in spinal fractures. The patient, after the operation has been performed can be laid on this frame and a cast applied much more satisfactorily than by the old-fashioned method of suspension. The essayist called attention to the fact that in one case he used suspension to separate the fragments, and of making extension, but I am sure that if he will in the future use the Goldthwaite frame, his results will be much more satisfactory.

Dr. Mammen (closing the discussion): I wish to say that the apparatus which Dr. Ochsner spoke of is excellent. The difficulty we have out in the country is in having it at hand when an injury takes place, and then, not having it, we have to resort to such methods as are at hand, and do the best we can under the circumstances.

I desire to say a word or two more, and that is, the entire point of my paper, if it had any, was that we should do something along the line of helping a patient whose back is broken. Again and again, I have known patients, who have been injured in this way, carried off to some house or hospital, and allowed to lie there, and that is all that was done for them. We should try to relieve them.

THE METRIC SYSTEM.*

BY JOHN A. KOCH, PHAR. D., M. D., QUINCY.

At the last session of Congress, the Committee of the House of Representatives on Coinage, Weights and Measures considered a bill for the adoption of the metric system and reported the same to the House, but owing to the failure of friends of the metric system to influence our law-makers in securing its recognition and passage, it was passed over.

The metric system was made lawful in the United States in 1866, and since the distribution of the perfected prototypes of the metric standards was made by the International Conference in Paris in 1889, efforts have been made in Congress to adopt it. The meter and kilogram sent to the United States are now used as the basis of all comparisons of mass and length in this country, even in the common system. There is at present no satisfactory standard yard in the possession of the Government. The early standards procured by the Secretary of Treasury are so poorly constructed and the lines so broad, that a more accurate yard may be made by means of the standard meter. Troy and avoirdupois weights submitted for

inspection are tested with the metric weights or with standards which have been derived from the standard kilogram. That is to say, the standard meter and kilogram are so well constructed, that more accurate standards in our common system may be produced in this manner, than by comparison with any standard yard or troy and avoirdupois weight in existence.

Personal experience of almost 15 years with the metric system in compounding pharmaceutical preparations, prescriptions, analytical work, prescription writing and in linear measure, has shown me its superiority over the troy and avoirdupois weights and the present system of measurement. Its simplicity, its adaptedness for the uses in medicine and surgery is so wonderful, that I feel I should encourage and induce others to use it, so that it may become the universal system of weighing and measuring. The advantages of the metric system have so long been conceded that there seems no longer a basis for argument concerning the advisability of its general adoption, particularly by the medical profession. It is perhaps because of this ready conceding that adoption has not followed, for interest often flags when there is no opposition.

Medicine being a universal science and not sectional or national, we should have a system of weights and measures that would be the same in all languages and among all nations of the civilized globe. Translations of medical literature of such countries as France, Germany, etc., involving the metric system of weights and measures would not take up the time that it does if the system was exclusively in vogue in the United States. We would more definitely get the idea of the foreign author if we understood the weight and measure as he expressed it in his article. Transposition of one system of weights and measures into another, can never be exact, unless it becomes confusing to the mind, the equivalents are always approximate. The same may be said of the translation of our literature in such countries using the metric system. More attention would be paid by such foreign countries to especially therapeutic

*Read at 53d Annual Meeting, Chicago, May 30, 1903

tie literature of the United States, if weights and measures were expressed in the unit system. This I have found personally to be a fact while studying in Berlin, a professor expressing his regret that our weights and measures were given in the old system or where equivalents were given, the same were so exact that it was confusing. It is an advantage to be in harmony with the majority of scientific and medical men the world over, it must be remembered that our apothecaries system is only approximately related to that in use in the British Empire. As to the international character of the metric system, a prescription written in that system would be correctly filled at almost any drug store in the United States, Germany, Italy, France and probably England. Can as much be said of a prescription using the apothecaries' system, which would not be the same if compounded even in England as here?

What we want in weights and measures is the simplicity we have in our currency. No one objects to either the name or the use of dollars and cents, and no one in this country would be willing to give up our decimal mode of counting money for that of pounds, shillings, pence and farthings, in which reduction from one denomination to another is a continuous source of annoyance. Without the change of a single figure and by only changing the position of a decimal point, we are able to express the fortune of a millionaire in fractions of a cent. Not the least difficulty is experienced in forming an estimate, clearly and promptly, of the value expressed by a given number of dollars and decimals of a dollar; neither does any one think of reading the amount as so many eagles, dollars, dimes, cents, mills and tenths of a mill. Though these denominations are given in the books, we have practically discarded all except dollars and cents, because these two are found sufficient for most purposes. In like manner, most of the denominations of the metric system will not be employed, because they are not wanted and because the numerical relation between the few which remain in use is so very simple and easily remembered.

The reasoning which has been applied to

the dollar in contrast with the British pound sterling, is equally applicable to the gram in contrast with the ounce avoirdupois or ounce apothecaries. The pound and ounce avoirdupois have a different weight than the pound and ounce troy. The confusion resulting from this inconsistent use of the same name for things of different value is interminable and unnecessary. Let the use of the pound and ounce be replaced by that of the gram which is a perfectly definite value. In pharmacy it is neither difficult nor confusing to express any given weight in grams and decimals of a gram, any given volume in cubic centimeters and decimals of the same. By the use of a vertical line near the right edge of the prescription blank, like that placed in an account book to separate the dollars from cents, the danger of making mistakes is far less than when the arbitrary symbols of the apothecaries' weight are employed. To express ounces in scruples, or drams in grains, a mental calculation is necessary, not very difficult it is true, but still implying just so much liability to error, and a loss of time, which may be avoided by the use of the decimal notation. The simplicity of the metric system I do not think can be questioned, a system which is wholly decimal, which is simply a multiplication or division by that series of factors—tens—can be compared in difficulty with our complicated tables. Which is the more scientific, a system that divides decimally throughout, or one that divides a gallon into eight parts, each of those into sixteen parts, each of those into eight parts again, and finally each dram into sixty parts, thus using three systems of divisions in the one system of measures, and also varying its measures in the two countries in which it is most used? In addition to this, the confusion of terms whereby an "ounce" may signify either 480 or 437½ grains is surely unscientific.

The arithmetic of the whole civilized world is decimal. We count from one to ten, and then begin a new series of another ten units, and so on. For this reason the metric system of weights and measures is easier and more natural to us than pounds, ounces, drams and grains, and pints, fluid-ounces, fluid-

drams and minims, or any other weights and measures, which are not decimal. When stated in a decimal system of weights and measures, the quantities can be added up as easily as if they were columns of dollars and cents; and the relative proportions of the several ingredients in a formula or prescription can be seen more clearly than when any other system is used. But great as these practical advantages are, there are other and greater advantages gained by the use of the metric system. To know the specific gravity of any liquid, is at once to know the weight of a liter of it without any computation whatever. If the specific gravity of chloroform is 1.490, then one liter of chloroform weighs 1490 grams. Contrary, to know the specific gravity of any liquid, it is only necessary to find the weight in grams of one, ten or one hundred cubic centimeters of it. These things can not be done in any other system of weights and measures.

In chemistry the atomic and molecular weights of elements and compounds are expressed in the decimal system, and to know molecular weights thus expressed, volumetric solutions for reagents and titration can be prepared with exactness without any computation whatever. The advantages of a decimal system for the accurate preparation of per centage solutions, such as normal salt solutions, cocaine, carbolic acid and bichloride of mercury solutions are incalculable. To understand intelligently the procedure for the analysis of stomach contents as carried out today, a knowledge of the metric system is imperative; titration is done only with volumetric solutions prepared in the metric system. Who would think of making a normal, deci-normal or centi-normal solution with the old system? To do so and carry out the titration and figure the results, would entail a great amount of computation and endless figures in fractional parts. In urine analysis, carried out in detail, the system is indispensable, and in making use of the hemocytometer, an instrument made only in the metric system, there seems to be no difficulty in comprehending what is meant by stating that a cubic millimeter contains a certain number of red or white blood cor-

puscles. The system in bacteriology enables work to be carried on with ease and simplicity.

The beautiful elasticity and adaptability of the metric system to general purposes is splendidly defined in the language of the celebrated German scientist, Von Hoffman, who says that in the metric system we have terms by which we can express in aliquot parts or in multiples the weight of the minutest mote which dances in the sunbeam, or the bulk, volume and weight of the ocean. Suppose we were to attempt to express that idea in our present system of weights and measures. In the first place, to express the weight of that small mote which we see in the sunbeam, we would have to go into very small fractional parts of a grain. What is a grain? Simply an arbitrary standard, and one, moreover, that bears no definite simple relation to units of volume and length. Again to express the weight or the volume of water contained in a large area, we would have to estimate it in cubic feet and convert those in tons. There is no interdependence, no correlation between these different units.

H. D. Geddings of the United States Marine Hospital & Health Service, states that from a standpoint of practical experience carried on for almost 25 years, the U. S. Marine Hospital & Health Service has made use of the metric system of weights and measures in transacting the internal economy of its business. The Service finds no difficulty in letting contracts in open market for medical and hospital supplies on the basis of the kilogram, the liter for liquids, or the gram of smaller quantities of more expensive and rarer materials. Medicines are compounded in the hospitals of the Service by the metric system; medical officers who enter the Service without previous experience in the metric system, very soon master such small difficulties as present themselves in learning to prescribe by the metric system. The conditions are the same in the Army and Navy. No disapproval is expressed by any one.

In reading the reports of the countries in which the metric system has been adopted, not one had any difficulty in the introduction

of the same. The system was introduced in Germany shortly after the Franco-Prussian war, no opposition was made whatever, in fact they welcomed it on account of the complexity of systems then in use. Mexico has the system almost five years, the most ignorant had no difficulty in comprehending it.

The objection that the majority of the profession would have to unlearn the old system, is the same argument that was urged against our decimal monetary system and which has been brought to bear against every effort at reform that has ever been proposed in any branch of human activity.

It is said that with the metric system more errors are liable to occur, both in writing and in compounding prescriptions. In writing, blunders depend more upon the carelessness of individuals than upon the peculiarities of any system of nomenclature or numeration. The confusion of dram and ounce signs, the cutting off of X's into V's, and the running together of two I's into a V, are quite as great sources of error. The use of a ruled decimal line on prescription blanks is a safeguard against false alignment. As to the danger of compounding, all pharmacists are thoroughly competent in compounding metric prescriptions and today no graduates of pharmacy leave their colleges without a thorough comprehension of the system. The United States Pharmacopoeia of 1880 made use of decimals and in the issue of 1890 the metric system was used entirely, and in the forthcoming issue of 1900 it will be used again, together with adult doses in the metric system. Pharmacists have dealt with the unit system for over 20 years, and every up-to-date pharmacist has a full set of weights and measures and metric prescription vials. Those who do not have them, would soon procure them, if they were demanded by physicians.

The metric system is not, as most generally believed, the table of equivalents as found in books on posology, materia medica and therapeutics. The system can be learned in 15 minutes careful attention to an explanation of it. The whole trouble comes in trying to convert one system into the other.

The manufacturers would gladly use the metric system in preparing pills, tablets and all other preparations. It would insure greater accuracy than ever before obtained, not reckoning time and money saved.

It is thought it would be objectionable to have a change made in the present system of weights and measures as it is generally believed that the capacity of certain household utensils are equal to definite values in the old system; for instance the teaspoon is credited with having a capacity equal to a fluid-dram, while a tablespoon is supposed to hold four times that quantity or a half fluid-ounce. M. I. Wilbert, apothecary of the German Hospital, Philadelphia, by comparative tests has found that figuring on the basis of 5 cubic centimeters for a dose of medicine in place of one fluid-dram, we come 35% nearer the actual capacity of an average teaspoon.

The methods for final adoption are by insisting upon the exclusive use of the metric system in institutions of learning, and have all examinations conducted by it, by having the Assn. of American Medical Colleges take measures to adopt the system in all the colleges, and by having a certain length of time for the optional period, and when the compulsory time comes there will be nobody to be compelled.

It is remarkable that a profession that has been so progressive as the medical profession of the United States, that has made such sweeping changes in therapeutics and surgery within the last decade, should hesitate in being the means of making the metric system positively universal, for if it is adopted here in the United States, England would lose no time in doing likewise. Why should we not lead the way?

Those physicians who have broken with habit and have used the gram, centigram and milligram in prescribing, and the cubic centimeter and liter as liquid measures, are unanimous in the opinion that a return to the apothecaries' system would be a hardship.

It can not be said that the metric system possesses any special difficulties, and its advantages at the same time it is impossible to deny. It is simple, elastic, scientific, and

on the whole a beautiful structure, and the interdependence and beautiful correlation which exists between its measures of weight and of capacity and its measures of length and area, I think only require a very limited consideration to appeal to anyone who is desirous of getting into the ranks of the progress of the age.

A CASE OF CONTINUED DEVELOPMENT OF THE FOETUS IN UTERO, AFTER RUPTURE OF THE MEMBRANES AND ESCAPE OF THE LIQUOR AMNII.*

BY H. W. CHAPMAN, M. D., WHITE HALL.

The function of reproduction is one that is full of the greatest interest to every medical man, and with which he must be more or less intimately connected during the whole course of his professional life.

I shall make no effort to elaborate the physiology of this subject, but will briefly mention merely the portion upon which the report of my case depends most immediately for its foundation.

The amnion is formed of the inner lamina of the external or serous layer of the blastodermic membrane, and together with the chorion forms the membranes which envelop the foetus during intra-uterine life.

It surrounds the entire foetus, being connected with the integument at the umbilicus and forms the outer covering of the umbilical cord.

According to some authors it secretes, and to others merely transmits by endosmosis from the uterus of the mother a fluid consisting of water, albumin, hydrochlorate of soda, phosphate of lime, and incidentally meconium and probably urine. This fluid surrounds the entire foetus, which floats in it, and from which it receives nourishment and protection.

The amount of fluid increases up to the end of the fifth or sixth month at which period it reaches the amount of about 900-1000 cubic centimeters.

From this time on it gradually decreases until the end of pregnancy when there remains about 480 c. c.

Destruction of the integrity of the membranes enclosing this fluid is usually soon followed by the death or expulsion, or both of the foetus.

The case which is here reported having taken a different course becomes of interest.

Mrs. A., nullipara, married between four and five months, good family history and good health, had her last catamenial period March 25, 1879. On the fifth day of July, following, was taken with a severe dysentery. July seventh at 8 p. m., while lying down, there was a sudden gush of water slightly stained with blood from the vagina, having the appearance and odor of amniotic fluid. I was with the patient almost immediately and before anything had been disturbed. From the clothing saturated the amount was estimated to be at least 480 c. c. Upon examination the os was found to readily admit the tip of the index finger.

Patient was kept in bed and the supposed inevitable miscarriage awaited. On the following day there was retention of urine which was relieved by the catheter. On the following day there developed a cystitis, probably because this case occurred before the days of antiseptic surgery. This subsided rapidly however as also did the trouble in the bowels, and in a few days the patient was attending to her household duties as usual.

From the time of the rupture of the membranes and continuing until the termination of the case, there was a continuous watery discharge from the vagina; the amount never large nor varying in quantity.

Previous to this there had never been any similar vaginal discharge.

Soon after convalescence she went away on a visit of a few days or a week in excellent health and spirits. The appetite was good, abdomen perceptibly enlarging and patient filling out all over after the manner of women with whom pregnancy agrees. Beyond the slight watery discharge from the vagina there was nothing unusual until the 14th of August, while straining at stool "something had tried to pass from her" which she immedi-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

ately replaced with her finger, and sent for me.

Upon examination a loop of umbilical cord about 7 c. m. long was found protruding from the uterine os which was dilated to a sufficient extent only as to admit the extrusion of the cord.

Pulsation in the latter was very distinct, a little irregular ranging from 108 to 120 per minute, while that of the patient was 80 per minute and regular.

There had been no pains nor any increase in the amount of water discharged from the vagina since the 7th of July preceding.

August 15th, is feeling well and about her room. At 6 p. m., some slight pains commenced which gradually grew stronger until 1 a. m., August 16th, a well developed foetus, not less than four months old measuring 27 c. m. in length was expelled. Forty days from the time of rupture of the membranes quickening had not taken place, but the cord continued to pulsate for several minutes.

The placenta was delivered immediately, was apparently healthy, there was no water, and but slight hemorrhage.

There was nothing eventful in the convalescence.

Discussion.

Joseph B. DeLee, Chicago: Mr. Chairman. —When the essayist wrote me about presenting this paper, I urged him to do so because it presented the occurrence of abortion in unusual aspects, and because it opened up a rather unknown field as to the pathology of pregnancy. Prolapse of the cord at an early period of pregnancy is not unknown, although quite unusual, and thereupon following abortion is the usual termination of such cases. But the rupture of the membranes forty days before the occurrence of the abortion is the most remarkable part of the case. We are learning latterly that the pregnant uterus can stand a great deal more than we formerly gave it credit for. We are learning too that pregnancies can go on in the most unexpected and anomalous places. It has occurred that the chorion has ruptured, and the child, with its amnion, has escaped between the rest of the chorion and the uterine wall; and has continued its development there. We have learned, furthermore, that the uterus may be ruptured and punctured, and the child can escape into the abdominal cavity, the cord passing alone into the uterine cavity to the uterine site of the placenta and the child continue its development in that way. We have learned, too, that the external air may be admitted, or, at least, there can be a communication between the outside world and the interior of the uterus, and yet the child continue to live

for several weeks or months. Ahlfeld reports a case where the membranes ruptured sixty days before the child was delivered, and the continual passage of liquor amnii was observed, and incidentally he remarks that the most careful examination of the liquor amnii failed to show the presence of urea or other urinary constituents in the discharge. But such an early case of ruptured membranes, with such a delayed abortion, is one of continued interest, and one can only conjecture what would have happened if the cord had not prolapsed, and life of the fetus been endangered thereby.

THE CURETTE IN PUERPERAL AND NON-PUERPERAL CASES.*

BY W. P. DAVIDSON, M. D., SULLIVAN.

An instrument shaped like a spoon or scoop for detaching substances from one another, as the placenta from the uterine wall, etc.

The instruments necessary for performing this work are a speculum, double tenaculum, intra-uterine douche, uterine dilator, fountain syringe and various forms of curettes.

I have one large sharp curette and several small ones both dull and sharp; which I carry with me.

I do not use a kelley-pad for there is danger of carrying infection from one patient to another; which I believe I once had to occur. As late as five or six years ago, we were instructed to carry with us, intra-uterine packing forceps or some form of an intra-uterine packer; today it is not considered good practice to pack the uterus with any material after curetting in abortion or for endometritis.

The operation is best done with the patient in the lithotomy position as irrigation is easier and at any stage of the operation a bimanual examination may be made. My solution for irrigation is usually a hot carbolic solution or a 2% creolin solution at the beginning and when through I use just plain sterilized hot water or a saturated solution of boric acid or bi-chloride 1-4000 may be used.

For cleansing the vagina and external genitals I use hot water and either 10% creolin solution or lysol soap.

*Read at 53d Annual Meeting, Chicago, May 30, 1903

This is a very important part of the operation; it is not necessary to have the patient shaved as some advise.

The instruments should always be boiled just previous to their being used; have your hands thoroughly cleansed in some anti-septic solution; patient prepared accordingly and you will see good results follow your operation.

Instruct attendant to have the patient bathed twice a day with sterilized water with a few drops of carbolic acid added.

Pathogenic bacteria gain entrance to the circulation in puerperal sepsis through a wound in the perineum, cervix, vagina or placental site.

In some instances, fortunately, very rare now days, on account of their virulence or some unknown condition of the tissues, the bacteria cause no reaction at the point of entrance; they rapidly enter the general circulation or their toxins do, overwhelming the system and bringing about a fatal issue in a few days.

The interior of the uterus in puerperal sepsis is the most common avenue for the entrance of the pathogenic germs and the placental site is the point *par excellence*.

Any where within fourteen days, if I am called into a case and find these symptoms and they usually occur in the morning, as I have found it in my practice, I make a diagnosis of puerperal fever.

The nurse or patient will say she has had two or three hard chills, bone and backache, the wasteing has suddenly stopped and she thinks she has taken cold or the Doctor has neglected her; which is sometimes the case.

Upon examination you will find temperature 103° to 105° F., pulse full, strong and rapid 120 to 140 per minute and a sweat standing upon the body in great drops; you detect a foul odor emanating from beneath the bed clothes, you can safely say you have a case of puerperal sepsis.

The two points on which I desire to lay special stress are as follows:

1st. The treatment of puerperal sepsis after normal labor.

2d. The treatment of non-puerperal patients after abortion, as I have found them in general practice in all classes of people.

The treatment of these two classes of patients, if done at the proper time and in the proper way there will be no need of an operation being done later for a suppurating lesion existing in the wall of the uterus, tubes and ovaries.

In the choice between digital and instrumental curettement the individuality of the operator finds considerable latitude.

When the cervix is partly open and hemorrhage is present; it means that abortion is incomplete and if the hemorrhage is severe the prompt evacuation of the uterus is imperative. Active interference is not dangerous, if the operator is aseptic and takes plenty of time to do his work. I seldom use an anaesthetic in doing this work, when necessary chloroform is preferred.

In cases of abortion where sepsis is present as shown by the elevation of temperature, rapid pulse or by a rapid pulse, while the temperature remains near normal, active interference is definitely and urgently indicated. The uterus should be curetted at once, the cavity thoroughly washed with a hot 1% carbolic solution.

When the uterus is thoroughly cleaned and irrigated it seems best to leave it to nature, except internal medication, which will assist to throw off the toxins that the uterus has already taken up.

These cases ought never to occur in practice where the patient has been under the control of the doctor from the first but even when met with, if treated at once they usually terminate happily.

It is a well known observation that the fatalities from abortion are mostly among the cases criminally produced.

Case 1. Mrs. G. C., white, age 40, was a mother and a grandmother, was pregnant three months; being a grandmother, I was not expecting pregnancy, but rather a malignant growth.

I made a second visit and found her in labor, prepared patient for a curettement, and removed a conception which was in a septic condition; had fever, slight chills

and lochia was very offensive; I gave a hot carbolized vaginal douche, curetted away the contents thoroughly and the patient made a rapid recovery.

Case 2. Mrs. H. G., white, age 20, primipara in good health but surroundings bad, labor at full term but slow, presentation normal, perineum lacerated requiring three stitches; which were put in under great difficulties, as the patient seemed to be hyperaesthetic to pain.

I saw the patient no more for seven days; when I received a call saying she had two hard chills and high fever.

I responded immediately and found the patient as follows: In bed with four comforts, two horse blankets, one sheet, the husbands overcoat thrown on the patient, face red, eyes snapping, nervous, sweating, pulse 130, temperature 104° F., clothes and bed clothes had not been changed since birth of child; I ordered the change made at this time, as I always see that they are changed before I leave the patient.

Under her was an old filthy comfort, napkins saturated with the lochia, no telling how long they had been there and on throwing off all the covering but the sheet a very offensive odor emanated.

I called for hot water and made preparations to douche and curette; to my surprise when I began the vaginal douche I found my stitches intact and good union. I cleansed the outer field and gave an anaesthetic, went into uterus with dull curette and then a sharp one, removed a few small clots and decidua tissue; used hot carbolized water then a 2% creolin solution, then plain hot water, gave calomel and patient made a good recovery. The patient was young and ignorant of antiseptic principles and under the care of a very ignorant, superstitious mother who blamed me for her second sickness.

Case 3. Mrs. N. M., white, age 21, was in good health but ignorant, dirty and lazy; said they could not get a physician during labor and had her mother-in-law to attend her.

On the seventh day they came for me, I found her with high fever, bed and clothing dirty, dried blood over fingers; where she had

been trying to care for herself. Three families living in the house, they began to make excuse about being poor, I put a stop to that by saying they could get plenty of soap and water and clean up or I would do nothing for them and to save the mothers life I began on her.

I ordered hot water, the old lady heated some in a stew kettle without washing it; I poured the water in a tin bucket and discovered bread and dough floating in it, I threw it out and ordered her to wash the kettle and heat some clear water.

I changed the patients clothing, put her in another bed, gave a hot douche, first on the outside for cleansing purpose, then a vaginal douche, then used a douching curette and hot bi-chloride water, used some pretty strong assertions about the after care of patient and left soon as I could. Patient made an uninterrupted recovery.

Case 4. Mrs. C. D., white, age 35, weight 120 pounds, not very strong, mother of three children, labor was normal giving birth to a healthy boy baby, weighing 12 pounds.

They were well to do farmers, patient had good care and was kept clean; on the eleventh day after labor I was consulted at my office about her having a chill early that morning.

I sent word that if any more chills occurred to send for me.

At 10 or 11 o'clock, a. m., she had two more chills and I was sent for; I found patient with a temperature of 104° F., pulse rapid and body moist with perspiration. I at once saw that I had a case of puerperal sepsis. I ordered patient placed cross-wise of the bed, secured a piece of oil cloth to drain water away and gave a hot creolin douche, then curetted the interior of the uterus and followed by an intra-uterine douche of same solution of creolin, then plain sterilized water.

Why this patient developed puerperal fever on the eleventh day I cannot say, I remember one professor saying this fever rarely occurred after the third or fourth day from delivery.

Patient made a speedy recovery.

Case 5. Mrs. M. S., white, age 25, mother of one child age 9 years, cervix and perineum torn during first labor and in very poor health, very much emaciated, weighing about 100 pounds; during eight years she had nine abortions, unable to carry any of them beyond the third month.

She supposed it had become a habit and never could go on to full term, had gone so far as to make arrangements to have a perineorrhaphy done but for some cause the doctor never did the operation.

Patient called me in the next time she aborted and upon examination I found placenta partially attached and considerable hemorrhage.

I made inquiry if the other physician had ever operated upon her at this particular occasion and found she had never been curetted.

I proceeded at once to curette the uterus, with her husband and sister to assist; after the work was done she asked me how long she would waste and have to stay in bed.

I told her, perhaps in twenty-four hours there would be no wasteing and in one week she could be up, she was astounded as she had always been confined to bed three to five weeks.

In one week she was able to be up and at her work and the results were, she soon became pregnant again.

As soon as she began to feel her usual symptoms return, viz.: vomiting, diarrhoea and extreme weakness; I put her on treatment consisting of diarrhoea mixture and stomach sedatives, as soon as these conditions improved I gave her ——— Cordial, made by a medical company of Indianapolis. Continuing it regular up to, and past the time of her usual time to abort; she went on to full term and was delivered of a healthy child, one year ago.

Case 6. Mrs. B. D., white, age 28, mother of one child, of a neurotic family, child died at age of one year, in July, 1900, of malarial fever.

She became pregnant in January, 1901, and aborted in March. I found os dilated, placenta partially detached and considerable hemorrhage; I removed the contents with a sharp curette, gave a 2% creolin douche and

patient was up in one week but was never well, she complained of continuous headache, was very nervous, had backache, dysmenorrhoea and was tired and weak. The following March she was thoroughly curetted again without the use of an anaesthetic, placed in bed for two weeks, she made a good recovery and in six weeks from time of curettement she became pregnant again. At the end of three months she showed signs of aborting again after a hard days work. I gave her a local treatment of iodine to cervix and pure carbolic acid to the cervical canal; as there was an eroded condition, which had caused a profuse leucorrhoea, put her to bed for several days, gave a uterine sedative and bromide.

She went on to full term, was in labor only one hour, had seven pains and was delivered of a healthy male child.

Case 7. Mrs. J. C., white, age 32, mother of two children, had suffered with terrific headache each month at menstrual period.

A full history I could not obtain, as I was called to give the anaesthetic for Dr. W. C. Bowers of Decatur; who curetted the patient and results were, less headache and pain, she soon became pregnant and I delivered her of a healthy child.

Case 8. Mrs. S. C., white, age 27, mother of one child, had been in poor health the past seven years, a neurotic, menstruation regular, dysmenorrhoea, hysterical at times.

When called into the case about March 1st, after she had been sick one week and had been under the care of another physician, who had given her hypodermies and calomel to the extent of salivation; I found her menstruating, vomiting, pain in the back and pelvis, constipated, hysterical coma, which she termed fits. I gave two hypodermies of Morphia 1/4 gr. Atropia 1/150 gr. followed by Cascara, which gave temporary relief.

A few days later I gave a local treatment of Tr. Iodine and Ichtholdine and a tampon, which was followed in two days by menstruation continuing three weeks, with the exception of two days.

Patient had been married two weeks previous to taking sick, suspecting pregnancy, I waited a few days for dilatation of cervix to

take place; when sufficient I curetted away a placenta.

Improvement began, patient was up in three or four days, on the eighth day I was called again, found her in one of those comatose conditions; eyes crossed, pupils normal, muscles rigid, had been in that condition for one hour. Family could not arouse her, I tried by pricking her with a pin, she seemed not to notice it.

By shouting in her ear and rolling head from side to side I succeeded in arousing her: then she declared she was only asleep, seemed to be free from pain but complained of headache.

Previous to this comatose condition she suffered great pain in back and pelvic regions.

I gave a hypodermic of Morphia 1/8 gr. Atropia 1/200 gr. patient is rapidly improving.

Some are adverse to using the Curette when you have a case of Sapræmia and there are no placenta tissue or blood clots in uterus. The above cases all contained placenta or portions of placenta, except two cases, 6 and 7, and they were cases of simple endometritis.

Discussion.

Rudolph W. Holmes, Chicago: Mr. Chairman. It is a truism that scientific facts adduced in medicine are very slow in getting into the general literature and in practice. Dr. Bacon, in his paper, says that the mortality from puerperal infection is greater today than it was before antiseptic days. This is due largely to the fact that so-called antiseptic methods are carried out which are absolutely useless. A man scrubs hurriedly and thinks he is clean enough to undertake obstetrical manipulations or operations. Schroeder, ten years ago, perhaps it was fifteen years ago, enunciated the fact that the curette was absolutely contraindicated in obstetrics, where delivery occurred at or near term, and yet today the general practitioner first curettes in suspected cases of puerperal infection. In cases of abortion, arbitrarily fixing the limit at three months, the curette has merited use, because the anatomical conditions are different from what they are after that period. The fetus has no importance whatever; it usually escapes detection, passing off with a clot. The placenta is not fully developed. The decidua is the only important structure which needs consideration; it soon becomes necrotic, and offers a good culture medium for saprophitic germs, and for that reason it is necessary to remove all decidua. Where the case is perfectly clean, and the obstetrician has every assurance that he is clean, commonly the

finger alone is sufficient in removing the uterine debris. If there is any question as to whether there be any infection or not, the curette should be used. After the use of the curette it is necessary to make a digital examination to ascertain, first, whether everything has been removed; second, whether any injury has been done the uterus. I believe the so called sharp curette has no place in obstetrics. If a man has to curette an infected abortion, or possibly a non-septic one, he should use an instrument that is half-way between a sharp and the ordinary wire curette. After three months, however, I am convinced the curette is absolutely contraindicated. The statement enunciated by Schroeder fifteen years ago has been positively substantiated by the findings of Bumm in the last ten years. Bumm pointed out that the pathologic findings in infected puerperal uteri came within two classes: the first is the septic type, due to the pus germs; the other, a putrid or sapraemic. In the putrid infections of the endometrium he showed that the uterus was lined with a necrotic material, rich in germs, beyond this is a layer of round cell infiltration, and white corpuscles: this line of demarcation offers an effective barrier to the passage of germs into the muscle—in fact limits the infection to the endometrium. In this type of infection the patients rarely die. If the curette is used this necrotic mass may be removed, but in doing it the barrier thrown out is destroyed, and the germs have an opportunity to pass into the uterine muscle. Per contra, in a pure septic case there is little or no necrotic area, the line of demarcation of cell infiltration is poorly developed, and the more virulent the infection the less marked is this zone. Therefore, he who curettes in such a case simply produces denudation of the uterine muscle, opens up an immense absorbing surface, and the patient is worse than before. My stand is this: no septic case should be curetted, or douched. In a putrid infection it is permissible to go into the uterus once: if debris be present it should be removed with the finger, exceptionally a suitable placental forcep, under guidance of the finger, may grasp the placental remnants or pieces of membranes: a douche then is given—salt solution, or Lysol—and no further intrauterine manipulations should be tolerated. I feel sure that before long that curettage of the sapraemic infection is to be as strongly discountenanced as in the septic cases. One of the fallacies about infection during the puerperium is that physicians too commonly rely too much upon the presence or absence of odor to the lochia: if odor be present, infection has occurred: on the other hand if there be no odor the woman has not a puerperal infection: this one fact in many instances explains why so many puerperal women die of supposedly other diseases. The records of such deaths go to the health department as pneumonia, typhoid, meningitis, etc. The fact is that a woman infected with septic germs has little or no odor: the sapraemic ones are the cases with a foul odor. Other things being equal a marked odor to the lochia may permit the attendant to give a favorable prognosis.

Kronig, Williams, etc., showed that streptococcal puerperal infections had at their hands

only a mortality of 5 per cent. This method is to leave the uterus entirely alone—merely giving a supportive treatment. On the other hand, the French practice curettage as a routine and have a mortality of 35 per cent. The fact that antistreptococci serum was administered to the cases does not militate against the comparison, for both series of cases were so treated, but the French supplemented the treatment by curettage. Another fault is that too often an infection is held to be present, and at once the douche and curette are brought into play. Before active interference is undertaken all means should be used to eliminate other causes of elevations of temperature in the puerperium: this seldom can be done within twenty-four hours. The first thing to be done is to give the woman a saline purge to thoroughly clean out the bowel: the lying-in woman is peculiarly susceptible to the toxic effects of coprostasis. It has happened to me not at all infrequently that I have been questioned by a brother practitioner, or called to see a case of rise in temperature, arousing a fear of infection, only to find constipation: as soon as the bowels moved the temperature has subsided. The great factor in promoting absorption of toxic matter from the uterus is subinvolution: by promoting contraction and retraction much danger may be avoided. With this end in view ergot is the time honored remedy: more recently Pick from many painstaking studies of the physiological effects of uterine tonics has shown that hydrastis surpasses ergot in promoting contractions of unstriated muscle. My routine plan has been to give ergot and hydrastis in equal parts of the fluid extracts.

Gustav Kolischer, of Chicago: I would not discuss this paper, were it not for the fact that the author's views are obsolete, and his pathology is so at variance with modern obstetric teaching that his statements might pass unchallenged in a Society like this.

With regard to the use of carbolic acid in irrigating the uterus in the class of cases under discussion, it is wrong. Such practice should be condemned.

As to the pathology of puerperal sepsis, the author says that sepsis is due to bacteria invading the general circulation. That is sapremia, not sepsis. He tells us that infection consists of the invasion by microbes, which enter the general circulation, attacking mostly the placental site. I would ask him how does he know that. Postmortem examinations and microscopical examinations show, so far as they can be traced, that the entrance of the microbes of suppurative infection is through the parametric tissues. He tells us that the diagnosis of puerperal sepsis is made by the patient having chills, high temperature, a strong and full pulse, with a strong odor. Dr. Holmes, in his remarks, mentioned the fact that the strong odor is due to saprophytic infection, not to sapremia. In the diagnosis of sepsis chills do not amount to much as a diagnostic aid, except that some suppurating focus is established. If a parametric abscess follows puerperal infection, then we have chills. The essayist tells us that if a patient is septic, she perspires freely. If a patient

is perspiring freely, she is not septic. If she is septic, her skin is dry.

He informs us that he gives medicines internally because they are apt to throw out the toxins. This is the pathology of a baby and not of a man. Think of toxins being thrown out by administering medicine internally. I do not believe the essayist knows what toxins are, if he expects them to be thrown out by administering medicine internally.

If I understand him correctly, he said that called to see a patient who is bleeding while she is pregnant, he would resort to cervical treatment with iodine and carbolic acid. Such a statement surpasses the limit. Twenty or more years ago it was shown by Braun and his followers that in most cases of puerperal infection you kill the patient by curetting the uterus. This has likewise been clearly shown by scientific researches. The indiscriminate use of the curette in these cases should be strongly condemned. Such papers as this should be condemned in the strongest terms, for the reason that some practitioner may pick it up, read it, and endeavor to put the ideas of the essayist into practice, and such methods should be expunged from medical practice.

Joseph B. DeLee, Chicago: I take a little different view from that of the essayist in regard to this subject. I feel, however, that perhaps the criticism that has been made was a little too strong. Dr. Davidson is fully able to take up the cudgel and defend himself. I would like to say this much in defense of the curette: I do not believe in its use in puerperal sepsis. I have used the curette only in cases where I could not use the finger. In cases of puerperal sepsis there is a distinct use for the finger as a curette. Lately, the use of the rubber glove has greatly impaired the value of the finger as a curette, because we cannot use the finger-nail successfully through the rubber glove. We want to use the finger-nail; it can be made sufficiently aseptic, with the proper precautions, to be used successfully for the purpose for which it was intended. But we can get all the advantages of the use of the finger-nail and get the security of the rubber glove by covering the finger with a piece of gauze, and then we can rub off the offending structures from the surface of the uterus. The condemnation of the curette would lead us to think that we should not remove septic tissues or debris from the uterus, but such is not the case. The French, among them Pinard, Budin, and most of the professors of the French school, advise the use of the curette in puerperal sepsis, and have done so as recently as six months ago. Boudin recommends brushing out the full-term uterus. I do not agree with the French school in the use of the instrumental removal of anything from the postpartum uterus.

Regarding the use of antiseptic douches, sufficient has been said. Douches should not be prescribed in these cases, because the dangers attached to douching outweigh the advantages. A normal salt solution will usually accomplish what is desired as a douche, or a 1 per cent lysol solution.

Dr. Atkinson: We should combine theory and practice. I have used the curette in many

cases of puerperal sepsis with great benefit. In others, where I have sat around and have not done anything, the patients have died. We should strive to use common sense and good judgment in our practice. I never use a sharp curette in these cases, but a dull one, and I must say that I have succeeded in saving many patients by using it that otherwise would have died. My practice has been along the line indicated by the essayist, and largely concerned with such cases as have been described. I recall a case that came under my observation last year of puerperal sepsis, in which I did not use the curette, nor did I make use of douches, and lost the case.

Dr. Davidson (closing the discussion): I do not wish to add very much to what I have already said. I expected to hear my paper criticized. However, I believe if some of the members who have criticized my paper were placed in the position I was, they would have done differently from what they have said. As general practitioners, we must be governed very largely by the surroundings and condition of the patient. Some of the cases I have reported were seen out in the country; I felt something had to be done, and they all recovered from the treatment indicated in the paper.

With reference to the criticism about giving medicine internally to eliminate poisons or toxins from the system, I will simply say that I gave calomel to act on the bowels, which any practitioner would do who had a patient who was feverish, with coated tongue, foul breath, and had had no action of the bowels since the trouble began.

With reference to the discharges these patients have, I curetted and I do not remember any of them making a complaint. Most of them became pregnant in two or three months, and they must have been in a healthy condition, or pregnancy could not have taken place. Their subsequent labors following this treatment were perfectly normal.

LACUNAR TONSILITIS.*

BY JAMES MOREAU BROWN, M. D., CHICAGO.
Assitant Professor of Laryngology, Chicago Polyclinic

Lacunar tonsillitis is an acute inflammation of the lacunae or crypts of the tonsils. It is a self-limited disease and characterized by a whitish-yellow exudate, sometimes forming a membrane of variable extent. The erroneous term "follicular," which is usually applied to this condition, has been, to a great extent, discarded. The point of difference is that the follicles of the tonsils are only affected secondarily; the tonsillar crypts, or lacunae, being most generally affected and the chief seats of the disease.

The use of the two terms has led to much confusion. That "follicular tonsillitis" may be "croupous" in the sense of there being fibrin in the exudation hardly justifies that distinction, as opposed to "diphtheretic," since the occurrence of fibrin is merely indicative of the extent of the injury. Neither is the occurrence of the membrane of diphtheria in itself distinctive, since numerous caustics may produce a membrane identical to that seen in diphtheria. Koplik (New York Medical Journal, 1894) has described several "lacunar tonsillitis diphtheria" cases. In eighteen out of thirty-nine only staphylococci and streptococci were found.

Follicular or acute cryptic tonsillitis, which is the most interesting form, is not follicular at all, but a simple or desquamative infection, due to streptococci, staphylococci, or pneumococci, and is also possibly contagious.

One hundred varieties of micro-organisms have been described by Miller as existing in the normal mouth, and an interesting question arises as to why these should suddenly and under unknown conditions, produce pathological changes and invade the general system.

Lacunar tonsillitis occurs after operative interference in the nasal cavities, especially when the galvano-cautery is used. It also occurs when cutting instruments, or caustic applications, are employed. We cannot but suppose, therefore, that a casual connection exists between the intra-nasal interference and the tonsillitis, for the latter occurs in individuals who have never suffered from it previously. It has been known to occur in one and the same person each time the cautery has been used in the nose. It occurs frequently during the first days after the intra-nasal interference, and involves either the palatine or pharyngeal tonsils, or both of them at once. The explanation that has been offered is that something is carried by the lymph or blood circulation from the nose to the tonsils which sets up the inflammation in the latter. By this we are led to believe that the injury, which damages the protective epithelial lining of the nasal cavities, throws open the doors to the exciters of inflammation, and that through this door

*Read at 53d Annual Meeting, Chicago, May 30, 1903

they obtain access to the tonsils from within by way of the lymphatics.

Tonsils are prominent portals of entrance for various microorganisms. This is due to the physiological gaps of the covering epithelium, which are large enough to give easy passage to emigrating leucocytes and emigrating microbes.

Both tonsils are usually affected, and the condition may extend to the faucial pillars, palate and pharynx. Fraenkel reports a case of its occurrence upon the lingual tonsil. Involvement of the cervical glands is not an uncommon accompanying symptom. The onset is characterized by the rapid rise of temperature, sense of uneasiness in the throat, and difficulty in swallowing. Upon examination the tonsils appear red and swollen, with whitish elevated spots, which, upon closer inspection, are seen to be the secretion issuing from the orifices of the lacunae. These may be seized and pulled away, and usually appear in the form of threads which retain an attachment in the lacunae. The infection from one lacuna to the other may explain the appearance of a membranous formation over the tonsil. The secretion consists mainly of a large number of cells (chiefly leucocytes and epithelial cells), also of microorganisms, chiefly cocci, but no fibrin.

With the further progress of the disease, the redness and swelling of the tonsils increase, but these phenomena, as well as the pain in the throat, usually keep within moderate bounds; while, on the other hand, the fever advances with rapidity, a temperature of 40 degrees C., or more, being reached during the first evening of the illness. Next morning the fever remits, but again rises in the evening, until during the night the crisis of the temperature declines to normal, with the occurrence of perspiration and urinary sediment. In some cases the fever may cease within twenty-four hours; in others, it may continue for three or four days. In all cases, however, it gives the impression, by the suddenness of its onset and by its termination in crisis, of an effective fever, which is strengthened by the disproportion which exists between the local

phenomena and the height of the fever, while it is further supported by the fact that in a fraction of all cases a swelling of the spleen is to be detected.

When the infection occurs in individuals who suffer from hyperplasia of the tonsils, and they are frequently attacked by it, the performance of the necessary tonsilotomy during the acute stage of the disease is sometimes indicated on external grounds. Experience in such cases proves that tonsilotomies performed during angina lucanaris do not differ in their course from the usual operation.

In considering the etiology we limit ourselves only to those cases which are unquestionably instances of lacunar tonsilitis. We exclude, therefore, from our etiological investigation all those cases in which pseudomembrane occurs, or in which the *Loeffler bacillus* is found. It is not desired to convey the impression that in simple lacunar tonsilitis the inflammation may become intense, that fibrin is secreted, and that false membrane is formed. To make a clear distinction between lacunar tonsilitis and diphtheria, it is best in the etiological investigation to leave these forms out of consideration and confine ourselves to typical and perfectly pure cases. For the same reason we must exclude all cases in the secretion of which the *Loeffler bacillus* occurs.

The fact that it goes from the nose to the tonsil is a point of importance. The question arises as to whether the microorganisms which cause lacunar tonsilitis are necessarily introduced into the body from without, or whether they are already in the tonsils, but must await an injury to the mucous membrane before they become pathogenic, a condition which is not only auto-infectious, but capable of being transmitted from one subject to another. An illustration of this is a case reported wherein a musician had acquired tonsilitis. At first there was no elevation of temperature; pulse small, rapid, and general condition bad. Second day, temperature 39 degrees C.; pulse 108; meteorism and abdominal pains; enlargement of the spleen. Third day, it was apparent that the patient suffered from peri-

tonitis. Fourth day, death occurred in spite of all remedies.

Post mortem showed simple peritonitis without perforation; pulmonary edema and hypertrophy of the tonsils without membrane.

During the afternoon the physician cut himself and in spite of energetic disinfection, was attacked the next day with lymphangitis, lymphadenitis and high fever. Having pain in the pharynx, an examination was made which disclosed lacunar tonsillitis. The wife and assistant also suffered from the same condition but finally recovered.

It is important to note that many patients appear to be more emaciated and weaker after their recovery than the slight character of the local affection and the short duration of the fever would lead one to suspect.

A SIMPLE METHOD OF APPENDECTOMY.*

BY EMIL RIES, M. D., CHICAGO.

The methods of appendectomy can be divided into two classes, those with a stump and those without a stump. Those without a stump have been developed more recently, as the advantages and disadvantages of the original methods became better known and understood.

A short sketch of some types of operation with a stump—without any attempt at a complete enumeration of all methods ever employed—will form the best basis for a critical consideration of these methods.

Method 1. The mesentery of the appendix is cut and ligated, a ligature is placed around the appendix near its base, the appendix is cut off above the ligature, the serosa is sutured over the stump.

There are several objections to this method: Firstly, a ligature placed around the base of the appendix presses together the mucosa, but mucosa can not heal to mucosa. This ligature therefore does not occlude the appendix. Secondly, the piece of mucous membrane between the ligature and the cut surface cannot be regarded as aseptic. Infec-

tion may start from it. Thirdly, the peritoneum sutured over this stump is really the only protection of the peritoneal cavity and this protection is jeopardized by the septic stump and the possible septic accumulation between stump and peritoneal suture. If there is no peritoneal suture and the ligature around the stump gives way or cuts through, fecal extravasation and peritonitis or fecal fistula or patulous stump opening in the abdominal wall and recurrent abscess in the abdominal wall may follow.

Method 2. The mesentery is treated as in method one. Then a cuff of peritoneum and muscularis is stripped back from the appendix near its base, the mucous membrane is ligated at the base of the cuff and cut off, the small remnant of mucous membrane between ligature and cut surface of mucous membrane is cauterized with a strong antiseptic. Then the cuff is ligated over the stub of mucosa and the peritoneum sutured over it.

This method is an improvement over the first as it takes into consideration the septic condition of the mucosa and as it brings together the raw surfaces of the cuff over the stub of the mucosa. But the ligature of the mucosa is useless as shown above. Also the small piece of mucosa between the ligature and the cut surface is not absolutely aseptic even if cauterized, as the depth, to which the antiseptic may penetrate, is an unknown quantity as well as the depth, at which microorganisms may be present in the mucosa. There is therefore again the possibility of a septic accumulation between stub of mucosa and ligature of the cuff. The ligature of the cuff may resist the pressure of this accumulation or its may not. Furthermore, if there is a stricture in the appendix between the ligature of the mucosa and the coecum, the conditions are extremely favorable for a pathological accumulation in the stump of the appendix. The consequence may be that the ligature of the cuff bursts or cuts through and a fecal fistula is formed, if the conditions are favorable, and if they are not, peritonitis and death may result. An additional peritoneal suture over the cuff, which buries the stump in a depression of the bowel wall gives greater protection, but leaves a row of sutures

*Read at 53d Annual Meeting, Chicago, May 30, 1908

in the abdominal cavity, which may give rise to adhesions.

Method 3. The mesentery is cut off and ligated. The appendix is cut off near the base, a thermocautery is introduced into the stump, the mucosa burned out, the stump ligated, shortened as much as possible and the cut surface cauterized again.

This method provides greater asepsis for the piece of appendix between ligature and cut surface. But the cauterized stump is unreliable as to healing and may give rise to adhesions.

Other methods of treating the stump, by the angiotribe or the electro-haemostat are open to similar objections, as they leave more or less dead tissue in the peritoneal cavity, which may give rise to adhesions. Also it is still unproven that they provide an efficient and lasting closure of the stump.

I am well aware of the fact that thousands of cases have been operated on successfully after these methods, but I have also had occasion to do secondary operations on cases which had been operated on by these methods by other surgeons. The dangers which I have described, are very real ones, though in the vast majority of cases our good friend, the peritoneum, does its work so well, that even if our treatment of the stump is not ideal, the peritoneum insures the patient's safety.

The recognition of the peritoneum as the most efficient factor in the closure of openings in the bowel found expression in more modern methods. Reliance on the peritoneum for quick and firm union is however only one of their principles. The other main feature is the complete abolition of the intraperitoneal stump for two reasons: first, because the mucosa in the stump is always unsafe; secondly, because every method, which forms an intraperitoneal stump, practically leaves an appendix, smaller than the original one, it is true, but nevertheless an appendix subject to the entire pathology of the original organ. The larger the stump left, the greater the risk of appendicitis recurring after appendectomy.

The ideal method therefore is one without any stump.

In cases where a perforation had taken place close to the base of the appendix or where necrosis of the appendix had extended into the cecum near the appendix, complete excision of the appendix and closure of the opening in the bowel by Lembert sutures has always been used and gives good results. The only reasons why this radical extirpation of the appendix is not done in every case, I think, are, first, that the repair of such a comparatively large opening requires more time for suturing and, secondly, that the size of the opening favors escape of fecal matter in the course of the operation.

In cases where the base of the appendix is not severely diseased and where it is patulous, the stump can be avoided without complete excision by simple inversion of the appendix into the cecum. The first method which employed this principle goes under Dawbarn's name. In Dawbarn's method the appendix is cut off close to its base after a purse-string suture has been placed around the base, then with an instrument the stump of the appendix is dilated and inverted into the cecum and, while the instrument is being drawn back, the purse-string suture is closed. Over the purse-string a second purse-string may then be placed. There is then no stump with a dangerous mucosa and practically no suture-material in the peritoneal cavity to give rise to adhesions.

The only objection, that I have to the method, is the following: In dilating the stump and inverting it an instrument is passed into the cecum and withdrawn after the inversion along the serosa of the stump. There is a possibility of infection of the serosa at this step of the operation, which may endanger the desired union of the serous surfaces. I have therefore made a little modification, which avoids this danger.

I proceed as follows: After the appendix has been lifted out of the abdomen a forceps is passed over its mesentery up to the cecum and the appendix up to its base is severed from the mesentery. A small, blunt forceps takes hold of the cecum at the base of the appendix and holds it up as high as possible. Sponges are placed under this forceps around the appendix. Another forceps catches the

appendix 1-3 inch from its base, the appendix is cut away underneath this forceps and removed with this forceps. The stump of the appendix is now simply held by the forceps at its base and escape of fecal matter is prevented merely by making traction on the cecum. Now a fine, round, straight needle with a thread, at the very end of which is a thick knot, is introduced into the stump 1-16 inch from the cut surface from the inside outwards, then the needle is passed into the lumen of the appendix and on into the cecum and passed out through the cecum about one inch from the base of the appendix. Pulling on this thread inverts the appendix immediately in a most satisfactory way. The forceps at the base of the appendix is removed and the cecum held only by the inverting thread. The appendix now is inverted so completely that its serous surfaces are in perfect apposition and are held there by mere traction on the inverting thread.

Now a second needle with a catgut thread sutures in three or four continuous stitches serosa of the funnel of the inverted appendix. Then the operator holds in one hand the suture of the funnel and with the other cuts the inverting suture close to the bowel-wall, then rolls the wall of the bowel between his fingers. Thereby the portion of the thread, which was in the wall of the bowel, is made to slip into the lumen of the cecum as the inverted stump of the appendix is moved away from the coecal wall, to which it was drawn by the inverting suture.

Now the mesentery is sutured with the same thread which closed the base of the appendix. The mesentery is drawn into a small bunch and by tying the end of the thread on the mesentery to the beginning of the thread the stump of the mesentery is made to cover the suture of the appendix, so that no foreign body remains in the peritoneal cavity except the last knot of catgut. I may add, that it takes less time to perform these simple manipulations than it takes to describe them.

The first objection which, I suppose, will be raised against this method, is the perforation of the bowel at a distance from the appendix by the inverting thread. But this

prick of the needle is perfectly harmless. The experience with the Connell suture is proof positive of the harmlessness of this stitch-hole, which the operator closes immediately by rolling the bowel between his fingers. Another possible objection is that the inversion would be impossible, where there is a stricture or obliteration of the appendix between the cut surface and the cecum. The obstacle could, however, be overcome by simple perforation of the obliteration or stretching of the stricture and still there would be no risk of infecting the serous coat of the appendiceal stump.

There has never been any trouble in consequence of the use of this method. I have employed it in twenty-one cases. The patients have all recovered without the slightest trouble and I therefore feel justified in publishing the method as a very easy, simple and safe one.

Discussion.

A Member: Mr. Chairman.—I wish to ask the essayist in reference to passing the needle, where the inversion of the stump of the appendix through the cul de sac of the cecum is represented, whether it is not preferable to pass it upward through the upper wall of the cecum instead of in the manner described by the essayist, although the diagram may not illustrate what is intended. Passing the needle through the cul de sac of the cecum favors the gravitation of fecal matter and other deleterious products, whereas if it is passed upward it might, to a limited extent, eliminate that disagreeable factor.

The idea advanced by the essayist is a good one. I have practiced essentially the same thing in a little different way.

I want to mention a little experience I had about a year ago in operating for what was supposed to be an appendicitis. On reaching the appendix, we found it perfectly intact, but from previous attacks of colitis there had been adhesions of the entire cecum to the abdominal wall, but some movement of the patient had separated them. The cecum had become ulcerated; there was a surface about three by five inches in a state of suppurative inflammation, with nine perforating ulcers through the anterior wall of the cecum. It was a novelty to me, as I had never heard of or seen anything of the kind before, and in cleansing the parts, as well as curetting away the ulcerated tissue, throwing a fine silk ligature around the tissues and bringing them together; the patient apparently did well for a while, but finally collapsed and died.

I merely throw this out that the members may look the matter up.

The principal question I am concerned in is whether it would not be better to pass the

needle upward through the upper portion of the cecal wall instead of down through the cul de sac.

Carl Beck, Chicago: While I think the idea advanced in Dr. Ries' paper is a good one, I think there is objection to passing the needle through the bowel in the manner he has described, and probably this could be obviated if the doctor does not include the bowel, but allows the second suture to remain in the bowel wall, and thus avoid infection of the serous surface. However, I suppose in some of the simple appendicitis cases (catarrhal) this would not make much difference, but in cases of infiltrated bowel, at the base, it would make considerable difference, and I think it could be obviated largely by allowing the suture to remain within the bowel wall altogether without including the cavity.

Charles C. O'Byrne, Chicago: I think the danger of passing the needle through the bowel in the operation that has been described by Dr. Ries has been magnified. In doing appendectomy I use a method similar to Deaver. It is this: He picks up the bowel with the thumb and forefinger, holds it, ligates the mesentery, and cuts away the appendix without letting go of it. With a straight needle, threaded with fine silk, he catches the peritoneum on one side from without in, draws up the suture, catches the peritoneum again on the other side, and makes a continuous row of sutures through the serosa and muscular coat. He inverts the bowel, draws up the thread and ties it. With the stump short, a second row of sutures is used for the peritoneum. Not a single thread enters the bowel except to invert the stump when cut to the bowel wall. It does not become loose after the appendix is cut off. Then, with a suture of fine silk which he uses, he inserts a second row of sutures.

J. McCullough, Chicago: I wish to mention a method that I have been practicing for something like a year. I grasp the appendix at its juncture with the cecum with a pair of forceps which I leave in place, cut off the appendix on a level with the forceps, go over the mucosa with carbolic acid, and then insert a continuous row of sutures, back and forth, about one-eighth or three-sixteenths of an inch from the lower margin of the forceps. When this has been completed, with the forceps I force the stump down into the cecum, draw the purse-string tight, and this buries the stump. I have never found difficulty in dealing with the stump by this method. I put a second row of sutures through the mucosa and muscular part of the bowel, covering in the mesentery where it has been severed. This is a quick, easy method. We have complete control over the stump with the forceps.

E. M. Sutton, Peoria: I would like to ask whether the operation described by the essayist is intended as an interval operation, or as operation during acute attack. If it is intended as an interval operation, it is just as well to avoid the danger of infection this way as well as by other methods of inverting the stump. If this method is attempted in septic cases, with abscess, there is some danger of perforating the bowel, and there is some dan-

ger in manipulating the short, thick, infiltrated stump of the appendix, in that it may break through and slip out of the grasp of the forceps, and give trouble in those cases that are not interval operations.

Dr. Ries (closing the discussion): One gentleman asked where I passed the needle. That depends on where it is most convenient.

What Dr. Beck suggested is impossible. If he will try what he recommends on a piece of animal gut, if he takes a needle and passes it through the bowel wall, he does not invert the appendix, but only pulls on the stump of the appendix, afterwards he has a thread making a tunnel in the bowel wall, which is not clean. In the way I use it, it is buried in the lumen of the bowel, where it is harmless.

Dr. Sutton asked whether the method was intended for use in interval operations or during the acute attack. I can answer, that I have used the method both for interval operations and operations during the acute attack; but where there is gangrene, necrosis, suppuration at the base of the appendix and of the surrounding tissue, the method which I have described of excising the appendix completely and suturing the hole in the bowel is the only correct one.

SURGICAL MANIA, OR INSANITY FOLLOWING SURGICAL OPERATIONS.*

BY WM. H. MALEY, M. D., GALESBURG.

Until recent years nothing has been written on this subject. However, recently several valuable articles at the hands of able alienists and a few eminent surgeons have appeared. In presenting this paper I cannot be classed either as an alienist or surgeon, but as a general practitioner with somewhat of an experience as an anaesthetic specialist.

Naturally the first thing to be considered when confronted with a case of surgical mania is the patient's mental and physical condition before the operation, the family history and what has transpired since the operation. We must know and appreciate that there is somewhere a deeper seated predisposing cause which is really more responsible than the present exciting cause. For this we must look to constitution, heredity and a thousand other things. I do not think that any one who has at all studied the subject will dare say that the operation, of itself, caused the insanity. When insanity follows an operation the effect of the anaes-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

thetic, general or local, or whatever drug is used; the direct effect upon the brain from profound mental impressions; the effect upon the kidneys where prolonged anaesthesia is required, may all be important factors. The subsequent nausea and great thirst with the feeling on the part of patients that they are suffering the tortures of the damned for a few spoons of water which some thoughtless or notional surgeon in his routine way deprives every patient of without regard to condition, case or circumstance. Such are his ironclad and routine orders with the nurse. At the same time were he to remain with the patient for some little time it is safe to say he would often change his orders.

We find mania following the use of cocaine in extracting teeth, we find it following the use of atropine after eye operations. Dr. Hurd, of Baltimore, reports a case following administration of a dose of Sodium Salicylate. All of the above are capable of most disastrous consequences to the nervous system and must not be overlooked. On superficial investigation one might be led to believe that operations on the genital organs of neurotic women are more apt to be followed by mania than any other class of operations. Statistics do not bear this out but impress us with the fact that more women are wrecks, mentally and physically, from prolonged suffering and worry over diseased generative organs than from any other affliction. This question is somewhat unsettled but it seems to me that should any other operation be performed upon the patient just at this time without any special attention to the depraved nutrition or mental condition of the patient, without any words of encouragement or confidence, there would be just as much liability for mania to follow (barring sepsis) as though the required operation on the genital organs had been performed. Occasionally insanity becomes manifest as soon as the first few whiffs of the anaesthetic have been taken. Frequently it has developed upon the patient's recovery from the anaesthetic. Nevertheless this does not prove that the drug or anaesthetic produces the insanity. With some experience and all the facts I can obtain and realizing that opinions are very much

divided, nevertheless I am of the opinion that the anaesthetic is the least responsible of any of all the suspected causes of surgical mania. Many operations on perineum, rectum, etc., where it is impossible to obtain complete asepsis, or cases where patients are already in a septic state are performed without the slightest mental disturbance. Experience teaches mental disturbance occasionally follows just such conditions and must necessarily put us on our guard and use all possible measures of precaution. Toxic absorption from solutions and dressings may occur and in one of the forty-six cases reported by Dr. Richard Dewey†, a very strong suspicion was pointed to the lavish use of iodoform as a cause of the insanity. However, here there already existed a very nervous condition. The record does not state whether or not there was an idiosyncrasy on the part of the patient.

It will not be necessary for a surgeon to have more than one case of mania follow his operations to put him on his guard and ever afterward he will carefully study the mental condition of his patient previous to the operation. However, we must not wait for that cruel teacher experience, to arouse to their full sense of duty the large army of surgeons who are daily performing all sorts of operations. It is an encouraging sign that a great many are very careful and closely watch their patients before and after operations much more vigorously than heretofore. There are too many surgeons who fail to recognize, or if recognizing, fail to give due weight to the state of anxiety and nervous apprehension so often felt by patients with reference to the disease and the operation for its cure. This condition often combined with shock is certainly sufficient to cause insanity. Here it is that so many medical colleges have been lacking in their failure to teach, much less familiarize or warn their students of such marked dangers. To teach them how much can be done to minimize the danger by fortifying the patient in every way physically and mentally. Here is where "suggestive therapeutics" find a legitimate place and will produce

†Proceedings of the American Medico-Psychological Association at the fifty-fourth annual meeting held in St. Louis, May, 1898.

a state of confidence and tranquility of mind that no other therapeutic measure can accomplish.

The vast majority of our profession have a very limited fund of practical experience with insanity, because nothing, or so little, of insanity has been taught in our medical schools. Consequently most practitioners today have no familiarity with this disease and call it "brain fever," "delirium," "meningitis," "nervous prostration," etc.

It is not a disgrace to call in advice. So great a man as Dr. Wylie states that he has no knowledge of mental cases and invariably calls in an alienist or neurologist to advise.

In emergency cases or when it is necessary to operate at once in order to save life we would never be justified to hesitate because there is an occasional case of insanity.

After a careful study of the many cases reported by Dr. Richard Dewey and others we cannot help but come to the conclusion that the nervous strain, fear and apprehension of both anaesthetic and operation when a patient is in a debilitated and excited state, may of itself, produce insanity. However, under favorable circumstances, mental and physical, the same patient may with perfect safety undergo the same operation without any untoward results.

I cannot too forcibly impress you with the importance of the surgeon's attention and careful study and observation of his patient's mental and physical condition before and after the operation. The advantage to be gained to both patient and surgeon is of incalculable value for occasionally a case of insanity does develop and the operation can, of course, only be remotely responsible for it, but when the surgeon knows that he has done all in his power to forestall such an accident and if in doubt of his own abilities has called in an alienist or one who ought to know, then he can have the satisfaction of knowing that he was not taken unawares and has performed his full duty.

If my few remarks impress you with the importance of this subject and how it is too often ignored or misunderstood I will have accomplished my object.

Report of two cases coming under my observation:

Case 1. Mrs. P., age 32, one child 4 years. Family history negative, suffering with endo metritis, lacerated cervix and perineum, profuse leucorrhoeal discharge. Husband was of a very nervous temperament, had had serious strictures following gonorrhoea which were operated upon twice in Chicago hospitals with no success. His nervous condition and mental anxiety had worried his wife and together with her own trouble had made her quite nervous. She came under my care Dec. 1, 1901. I treated her regularly, preparing her for operation which was successfully performed Jan. 10, 1902, I giving the anaesthetic employing chloroform and later ether. She stood the operation nicely and at the end of 15 days was apparently in as good health as ever when suddenly her throat became very much inflamed and a typical case of diphtheria developed. Antitoxin was used twice during the next 24 hours. The patient had also exhibited a very fretful and pugnacious disposition. She lost sense of locality, became very abusive and wakeful, regardless of her personal appearance. Difficulty on swallowing as some post-diphtheritic paralysis had developed. At times would sing, cry, preach, pray and recite. Seemed to go through pangs of confinement and imagine a child was in bed with her. Hypnotics and sedatives would fail to produce sleep until an accumulative effect was obtained. She would have lucid moments and recognize relatives and physician. Bowels could be operated only with the greatest difficulty. Occasionally, for a day or two she would be quite herself and have every indication of recovering. She gradually grew weaker and died the last of April.

Case 2. Mrs. W., age 48, first came under my observation 48 hours after an operation for curettement trachelorrhaphy and perincorrhaphy. She was very nervous, excited and wakeful having scarcely slept since the operation. Temperature and pulse were high, function of kidneys impaired. A consultation of physicians was held and despite all efforts patient failed rapidly and died in 72 hours. Careful investigation in this case

showed that for some time previous to the operation patient had occasionally shown symptoms of derangement and the nurse in charge stated that she was very flighty and certainly beside herself the night before the operation. However, this was not reported until after the operation.

Discussion.

Archibald Church, Chicago: Mr. Chairman.—I have been very much interested in the cases detailed by the essayist. I had occasion some years ago to look up the question of traumatic insanity, and also the insanities following operations, which are cases practically of traumatic insanity, and I believe the situation is not as alarming as the conclusions of the essayist would have us infer. I had occasion to go through the records of 2,255 patients that were committed to the asylum at Elgin, to determine what per centage was attributable to head injuries, or traumatism of any variety, and out of that number only 1, 3/10 per cent. presented even an alleged trauma as the cause; and in some instances the traumatism was insignificant, as a knock on the head, or a fall, attended by no immediate symptoms, or alleged sunstroke, which was not clinically characteristic. In that entire list, as I recall, there was not a single instance in which insanity was attributed to surgical interference. I have since, in the capacity of consultant at four of the large city hospitals here, been brought into contact with a number of cases in which insanity developed subsequent to operation. Considering the opportunities I have had, I have yet to find a case in which the operation or the anesthetic alone was the significant cause of the insanity; but, as the author has well stated, almost invariably there are antecedent conditions or a previous condition of insanity, so that the operation and anesthetic play an insignificant part in the development of insanity.

In discussing the subject with the late Dr. Fenger, a few months before he died, he informed me that in his entire experience he had never had a case in which operation or the anesthetic was followed by decided mental disturbance.

Turning our attention to the cases reported, a woman, fifteen days after operation, without previous mental disturbance, contracted diphtheria, which was sufficiently severe to affect the nervous system, producing pharyngeal paresis, and the maniacal state so well described in the paper, warrants delirious mania. This form of delirious insanity is invariably the result of some toxic factor. In this case it was an infection. I attribute the mental condition to the action of the diphtherial toxin, and would cut out the operation as the cause of the mental disturbance entirely, except in so far as indirectly, by reducing her forces, she was made liable to the invasion of the diphtheritic germs.

In the second case, I should say the patient was clearly insane before the operation, so that the operation could have had only an

intensifying effect. I did not get the details of this case sufficiently to be able to analyze it.

These cases are characteristic of those which Dr. Dewey has reported in his paper. He and I have had some of these cases in common, and a careful analysis shows that operation is far from being a serious element, in the causation of insanity. The major element is in the individual, and operation is insignificantly small in its effect upon the mental condition of the patient who is subjected to anesthesia and operation. I would rather attribute insanity, when such does take place, to the poisoning that occurs as the result of the administration of chloroform or ether, than to the physical shock of the operation itself. I believe that the toxic condition, induced by prolonged anesthesia, is very much more deleterious than the actual invasion by the surgeon's knife.

Edward Bowe, Jacksonville: My experience in this line has not been as extensive as that of Dr. Church. I have never seen a case of post-operative insanity in my own practice. The first case I saw was in the service of Dr. Senn, but the previous history was one of insanity, and I took it to be merely a case of recurrent insanity. In the investigation I have given this subject I have yet to see the first clear case of post-operative insanity; that is a case that could not be attributed to some pre-existing condition. There are many cases of mental confusion, as Dr. Church has pointed out, following chloroform intoxication; but these are not pure cases of insanity, and they recover rapidly. True cases of insanity that follow operations are usually of the recurrent variety, and there was mental disturbance before the operation. Operative intervention and the surroundings in these cases simply exaggerate the symptoms.

I concur in all that Dr. Church has said on this subject.

Dr. Maley (closing the discussion): The point I tried to make was that neither the anesthetic itself nor the operation was the cause of the insanity. Dr. Church says that the effects from the anesthetic are more liable to produce insanity than the operation. I concur in that statement. But still insist that it is not so much the anaesthetic, as Dr. Church claims, nor the operation of itself but the patients mental and physical condition before and after the operation.

One thing I cannot hardly understand, nor agree with Dr. Church's statements about the anaesthetic, and it is this: Occasionally a case is reported in which it is said the patient became violently insane upon receiving the first few whiffs of chloroform. If this is true it cannot be the chloroform because the patient has not received enough to get any effects of the drug. What I wished to emphasize in the paper was, that it was neither the anesthetic nor the operation that produced the insanity, but rather the patient himself and his previous condition coupled with a lack of sufficient attention, encouragement and confidence from his physician.

THE DIAGNOSIS AND TREATMENT OF OBSCURE SYPHILITIC LE- SIONS OF THE EYE.*

BY E. F. SNYDACKER, M. D., CHICAGO.

Bloschko¹ by careful compilation of statistics of the Charité and other hospitals of Berlin has computed that between 4,000 and 5,000 individuals contract syphilis yearly, in Berlin; using these figures as a basis, he estimates that 10% of the population of that city either have been or are syphilitic. Equally large is the per centage of syphilitics in Copenhagen, somewhat larger in Vienna and Paris and markedly larger in London.

Klein² estimates that from 2 to 3% of all syphilitics, suffer from eye lesions, Hock³ places the figures as high as from 8 to 10%.

Alexander⁴ compiling his statistics from a number of different eye clinics, finds that among 138,000 individuals suffering from eye diseases 21.6% had syphilitic eye troubles. Fick⁵ estimates that in 50% of syphilitic eye diseases, that organ is permanently damaged.

Hirsch⁶ computes, that among the blind 12% owe their blindness to acquired and inherited lues, Wedmark⁷ puts the figures at 15% in Sweden and Magnus⁶ at 20% in Germany.

These figures give us a hint of the appalling spread of syphilis in the large cities, as well as the frequency with which the eye is involved.

When we remember that syphilis may attack any portion of the eye, excepting the lens, and may simulate in its method of attack almost every other known form of eye disease or neoplasm, we can readily understand in what a large proportion of obscure eye lesions syphilis is the etiological factor, and how in making a diagnosis of such lesions syphilis must almost always be ruled in or out before we have a firm diagnostic foothold.

These diagnostic difficulties are increased by the fact, that in the vast majority of syphilitic eye lesions there is absolutely

nothing so characteristic of this disease, that the ophthalmologist can make a diagnosis by the clinical aspect of the case alone.

To illustrate: the brunt of the syphilitic attacks upon the eye is, in the majority of cases sustained by the uveal tract; if we can rule out a small tubercle, a beginning sarcoma or perhaps, a small foreign body of the iris, then that disease of the uveal tract, by the clinical aspect of which alone, we can best diagnosis syphilis is iritis condylomatosa, but this characteristic form of iritis is the great exception, and so rare, that although I have quite a large syphilitic material and see many cases of iritis I have only seen two such cases in the past three years.

Another form of inflammation of the uveal tract which is held to be characteristic of syphilis is disseminated choroiditis with opacities in the vitreous.

Last winter I saw a case of disseminated choroiditis in a woman forty-six years of age, together with opacities of the vitreous, a subacute iritis in each eye with both irides partially tied down by adhesions. She had borne five healthy children, had always enjoyed the best of health, had never aborted, had never had an eruption of any kind, no periosteal thickening nor a glandular swelling; in short there was nothing whatever in the history of the case to suggest syphilis and yet because of the suspicious clinical aspect of the case she was put on inunctions and iodide of potash; she grew worse rather than better. A careful clinical examination of the patient and a urinalysis by Dr. F. Bleyney disclosed the fact that the woman was suffering from an interstitial nephritis. A suitable diet, large amounts of water, sweats, eliminants benefited the patient almost immediately.

This case is cited merely to show, that even though an ocular lesion from its clinical aspect may strongly suggest syphilis, the clinical aspect alone in many cases will not lead to a correct diagnosis.

A large proportion of cases of iritis is due to syphilis; this proportion has been variously estimated at from 25 to 75%. When we find a case of iritis with adhesions in a

*Read at 53d Annual Meeting, Chicago, May 30, 1903

young man, we usually feel quite positive that the case before us is syphilitic, of this, however, we cannot, by any means, be certain, unless we have convinced ourselves that a definite history of syphilis or certain signs of that disease are present, as the following case shows.

Mr. A., 33 years old, comes with a painful left eye, which shows intense circum corneal injection, posterior deposits on the cornea, a muddy iris minutely contracted which on the use of atropine dilates unevenly. The patient is an intelligent man apparently enjoys the best of health and positively denies any specific infection. He was married young, has three healthy children and his wife has never aborted. An examination of the urine by his family physician Dr. Pease disclosed albumen and casts in the urine. The patient improved promptly on a proper diet, sweats, eliminants and appropriate local treatment. If he had not shown this prompt improvement, then in addition to proper treatment for his kidney lesion, I should have suggested a trial of antisyphilitic remedies for as Karvonen¹⁰, Justus¹¹, Welander¹², Zimmerman¹³ and Doederlein¹⁴ have pointed out in eye lesions of this character, it is not so very uncommon to find a syphilis complicated with a nephritis, and we might especially suspect such a condition where nephritis occurs in a young man. Almost all lesions of the uveal tract then judged purely from a clinical standpoint are obscure lesions, and the only way in which a positive diagnosis can be made is by a thorough examination, careful investigation of the history, ruling in or out other conditions which might cause similar lesions by means of examination of the urine, blood, etc., and finally the therapeutic test; although this therapeutic test so far as eye lesions are concerned is by no means infallible, as I shall point out later on. What is true of lesions of the uveal tract is true as regards their obscurity of all other syphilitic eye lesions. The practitioner often believes that a skilled oculist need, but examine a retinal lesion and immediately pronounce it an albumenuric retinitis, a syphilitic retinitis, a diabetic retinitis, a leukemic retinitis a case of per-

nicious anemia or what not. This is a fallacy. A suspicion may be aroused in the mind of the oculist that the lesion before him is more or less characteristic of one of these diseases and he may accordingly advise a blood or urine examination, but until all the testimony is in, his verdict must remain in abeyance. Take for instance a case of albumenuric retinitis: this disease as Miehle, Hoffman⁸ and others have shown is nothing more nor less than an expression of changes in the retina due to disease of the vessel walls; the lesions of albumenuric retinitis then are such lesions as vascular changes and impaired nutrition of the retina due to such changes bring about. How are the lesions of a syphilitic retinitis brought about? In exactly the same manner; they are such lesions as are caused by damaged blood vessels. Does it seem strange then, that these lesions bear such a clinical resemblance as to render their recognition impossible, without other means of identification?

Here again history, careful examination, urine and perhaps blood analysis and finally the therapeutic test must be relied upon to put us straight.

Syphilis is apt to fall often and heavily upon the optic nerve. Badal¹⁹ in 631 cases of syphilis of the eye found that the optic nerve was involved 139 times or in over 20% of the cases. This of course includes the primary optic atrophies which are post or para syphilitic rather than syphilitic, and as I shall show later on for various reasons, we must differentiate the syphilitic from the post syphilitic diseases of the eye and place them in distinct classes.

Often enough however, the nerve suffers through direct syphilitic insults either primarily or secondarily.

It may undergo an atrophy secondary to inflammations of the uveal tract or retina, to syphilitic meningitis or basal gummata, to papillitis following brain gumma or through pressure following orbital lesions.

At times an early primary syphilitic optic neuritis occurs which may be due to an arteritis of the nutrient blood vessels of the optic nerve or a gummatus process in the nerve. It is astonishing how early in the

course of the disease and how severely at times the optic nerve is attacked.

These primary affections are the frankest syphilitic lesions of the optic nerve, for though a patient may be ignorant of or deny a specific infection, effective treatment often causes these lesions to clear up rapidly and without apparently having inflicted serious injury upon the nerve.

I saw such a case about six months ago: a young man, an inmate of the bridewell was brought to the out clinic at the Illinois Eye and Ear Infirmary; he was barely able to count fingers at fifteen feet with both eyes. Ophthalmoscopic examination revealed each nerve head hidden behind a mass of exudate. At the borders of the exudate and especially marked in the right eye were a number of flame shaped hemorrhages. A specific infection was at first denied, but an examination of the penis showed the remains of a not yet entirely healed chancre. The patient then admitted that the chancre had been contracted seven months previously. He was at once put on inunctions and increasing doses of iodide of potash, the exudate began to clear up very rapidly, and at the end of six weeks nothing pathological was to be seen in the fundus, but a slight blurring of the edges of the disc and a tortuosity of the vessels. The vision rose to normal in the left eye and very nearly normal in the right. Knies estimates that one-half of all ocular paralyses are syphilitic; certainly syphilis enters into the differential diagnosis of all such cases. These paralyses usually occur late in the course of the disease, and if they do not yield to treatment in a very few weeks the prognosis becomes very dubious. They must be reckoned among the most obscure syphilitic lesions because they come so late, and because in a large proportion of cases the therapeutic test does not help us out of our difficulty.

The following case serves to illustrate the difficulty at times attending the diagnosis of orbital lesions.

A lady 43 years of age has a small tumor at the inner upper angle of the orbit; it is adherent to the periosteum, firm, elastic,

painless, extends backward into the orbit, how far cannot be ascertained, it does not displace the eyeball sufficiently to cause diplopia, but the inner part of the upper lid is pushed noticeably forward. Dr. Good-kind who has had the patient in charge for a number of years has no reason to suspect lues. There are two children both in excellent health. The only suspicious circumstance in the case is that the husband of the lady died some years ago of tabes. Postassium iodide is given in large doses, and in ten days the tumor has entirely disappeared, in spite of that fact however, I am by no means certain that lues is present in this case. Inherited lues falls mainly upon the cornea and uveal tract; clinically an interstitial keratitis due to inherited syphilis differs no whit from one due to other causes. We are forced to depend on other signs of inherited syphilis for our diagnosis. The Hutchinson's teeth, the scars at the angles of the mouth, the sunken nose, deafness, joint inflammations, at times aid us in our diagnosis, but often we search in vain for these aids.

The following is a type of these doubtful cases as we often see them: A girl 18 years old comes with an interstitial keratitis; vessel formation in the deep layers of the cornea has already begun, under atropine the iris dilates with difficulty but is round. The fundus of the other eye is normal. The girl has always enjoyed good health, but is rather pale. No scars about face or nose, hearing is good, has never had a joint trouble, the teeth while somewhat decayed are by no means peg shaped, in short absolutely nothing characteristic of hereditary syphilis. Inunctions and the iodides in these cases often do harm rather than good, and are of no aid in making a diagnosis. The wide variation in the statistics as to the etiological factor in this trouble, is due to the fact that in a large number of cases it is impossible to state with certainty what that factor is.

Judged by their clinical aspect alone then, we may say that almost all specific eye lesions are obscure. In a very large proportion of cases the therapeutic test affords a brilliant

means of diagnosis, but in a certain proportion of cases it will disappoint us.

In all such cases, where the ocular lesions are the results of direct syphilitic insult, mercury and the iodide of potash properly administered work with marvelous efficiency; many such lesions however, cannot be regarded as truly syphilitic but must be looked on rather as post syphilitic.

We must remember, that an affection commonly found in all forms of syphilis often without signs of inflammation or gumma formation is syphilitic endarteritis and while other forms of lues may yield to treatment this form never entirely disappears. The vitality of tissues supplied by such vessels may be seriously impaired and affections due to this impaired vitality may occur perhaps years afterwards, even though the syphilis itself has entirely disappeared. This is especially true of the eye where we have a large number of small calibered vessels crowded into a narrow space. Lesions brought about in this manner do not yield to the most heroic antisymphilitic treatment, but the patient is injured rather than benefited by such a course.

Taking these facts into consideration we may divide eye lesions due to syphilis into two classes: 1st. those due directly to the syphilitic poison which are amenable to antispecific treatment, second, those due to secondary post syphilitic changes which are not amenable to antispecific treatment. The primary optic atrophies must be reckoned among such lesions, the nerve itself having atrophied because of impaired nutrition due to these early syphilitic changes in its blood vessels or perhaps following such impaired vitality of its spinal centers.

Choroidal changes, retinal lesions, forms of iritis especially of the asthenic type muscular paralysis following syphilis which do not yield to antispecific treatment, where other causes can positively be ruled out are to be placed in this second category or among the post-syphilitic diseases and to be regarded as lesions due to lowered vitality of tissue rather than to direct syphilitic poison.

The lesions of this second class constitute the really obscure lesions of syphilis, and

often in spite of the utmost care and diligence an absolutely positive diagnosis cannot be reached.

In the vast majority of cases, the eye lesions of inherited lues must be placed in this second class and must be ascribed to lowered vitality of tissues rather than to direct injury through syphilitic poison. It is for this reason that antispecific treatment is so useless in most of these cases.

In the treatment of syphilitic eye lesions coming under the first category which I have mentioned i. e. those due to direct syphilitic insult, appropriate antispecific treatment, combined with such local treatment as is indicated, usually yields rapid and often brilliant results. The vast majority of specific eye lesions occur after the first six months, in such cases it is well to exhibit iodide of potash as well as mercury. Inunctions combined with increasing doses of iodide of potash have rendered me the best service. I find an eye lesion yields far more rapidly when the mercury is taken in the form of inunctions than when it is given per os. In several cases intra muscular injections of the salicylate of mercury gr.iii, combined with benzinol 5i. inject 5ss. every four days, have done me good service. When the eye involvement is severe, or in a region specially damaging to vision, I often instruct the patient to rub in the mercury over the temporal and frontal regions avoiding of course the eyebrow, and often seem in this way to get prompter results. When this is done I employ the vasogen ointment of mercury (50%) which does not leave the nasty stains of the ordinary ointment. At times I have obtained brilliant results by the injection of 5 to 10 drops of a 1.2000 solution of bichloride, under the conjunctiva, although this often causes great pain which continues for hours.

The post syphilitic eye lesions afford but a hopeless field: in these cases tonic and stimulating treatment give the best results. Often antispecific treatment must be employed before we can be positive that the case before us belongs among the post syphilitic lesions, but as soon as we become convinced that a case does not improve but

rather retrogrades under such treatment then it should be abandoned at once.

I have seen cases for instance, of primary optic atrophy where heroic antispecific treatment had been employed month after month; these cases go down hill, very rapidly under such treatment. If there is one thing that will at least temporarily, stay the course of this disease it is strychnine given in increasing doses often stopping just short of toxic doses, but any drug which interferes with the nutrition of the patient damages rather than benefits.

What is true of other post syphilitic diseases is true, also of inherited lues. Cool salt baths with massage, plenty of fresh air, plain wholesome diet, some tonic containing iron, for usually these patients are anemic; with appropriate local treatment usually stay the course of the disease. Antispecific treatment is not to be entirely condemned, however, in some of these cases. I have at times employed antispecific treatment in such cases, as seemed to derive no benefit from the ordinary tonic treatment, with satisfactory results; in such cases however, antispecific treatment must be employed merely in a tentative way, and unless its beneficial results are soon noted must be abandoned.

It is often a problem what method of treatment to employ in a retinitis, where nephritis and syphilis are present at the same time.

Goldzieher and Groenauw¹⁵ concur that mercurials and iodides are dangerous, and those cases terminate fatally more quickly where these drugs are used.

Here again I think our classification into syphilitic and post syphilitic, will indicate the line of treatment indicated. If the nephritis and retinitis are being caused and aggravated by the syphilitic poison and respond to antispecific treatment then I should certainly employ such treatment, if however, these lesions are post syphilitic then undoubtedly we must agree with Goldzieher and Groenauw that antispecific treatment is to be avoided, and the condition is to be handled purely as a case of nephritis. If I may be allowed to briefly summarize the contents of this paper.

1. Clinically all specific lesions of the eye are obscure. We make the diagnosis by history, by examination, by ruling out other causes, and finally by means of therapeutic test.

2. Where syphilis has once existed, ocular lesions often occur which are not due to direct attack of the syphilitic poison, but rather to lowered vitality of the tissues brought about by vascular changes which were caused by the syphilitic poison. Such changes are not to be classified as syphilitic but rather as post syphilitic. Such lesions constitute the really obscure ocular lesions of syphilis, they are injured rather than benefited by anti-specific treatment.

3. We make a differential diagnosis between lesions of the first and second class by means of the therapeutic test. Such eye lesions as are benefited by antispecific treatment belong in the first class, such as are not benefited or even injured by such treatment belong in the second class.

4. In the treatment of eye lesions of class one, we employ antispecifics, in the treatment of eye lesions of class two, we avoid antispecifics, employing rather a tonic and strengthening form of treatment.

Bibliography.

1. Die Verbreitung der Syphilis in Berlin.
2. Die Syphilitischen Augen Krankheiten, Handbuch der Spez. Pathol. und Ther. Herausgegeben von H. Nothnagel, Bd. XXIII.
3. Die Syphilitischen Augen Krankheiten, Wiener Klinik 3, 4 Heft.
4. Syphilis u Auge, Wiesbaden.
5. Graefe Saemisch Neues Handbuch, p. 166.
6. Klinische Monatsb., Dec., '02, p. 444.
7. Hygien, March, '02.
8. Arch f. Aug. XLIV, p. 339.
9. Arch D' Opt, VI. p. 301.
10. Dermatolog. Zeitsch, 1900.
11. Journal Cutaneous and Gen. Ur. Dis., 1898.
12. Arch. f. Derm. und Syph., Vol. 37.
13. Knapps Arch., Vol. XXXI, No. 5.
14. Doederlein Munch Med. Woch, 1896.
15. Knapps Arch, Vol. XXXI, No. 5.

Discussion.

C. D. Westcott, Chicago. This is too important a paper to allow to go without any discussion whatever. The matter Dr. Snyder has brought before us is especially important from the standpoint of the general practitioner and I deem it a misfortune that more did not have an opportunity to hear the paper. It is unnecessary for me to call your attention to the fact that the classification of syphilitic diseases of the eye is important from the therapeutic

standpoint. But I want to make one or two suggestions. One, that it is our business as general practitioners to recognize the fact that serious and disabling lesions of the eye complicate syphilis. It is also our business to know that the constitutional treatment alone is not sufficient in these cases. That many of the cases can be steered to a safe recovery by prompt and early treatment, which sometimes must, of course, be guided by the ophthalmologist.

Another point I wish to emphasize particularly along this line is in regard to iritis which is a very common accompaniment of syphilis, and which, if neglected, is very fatal to sight. An experience in my own practice will emphasize better than anything I can say the importance of this point that I wish to bring out. I was called up on the telephone one day by a physician who told me that he had a case of syphilitic conjunctivitis and wanted to know what to do for it. I asked him if the initial lesion was on the conjunctiva, and he said it was not. I then asked him whether it was a case of syphilitic iritis, but he did not know. I asked him to test the patient's vision; he did not tell what vision he found, but said, "Doctor, I am going to send this man to you. Do what you can for him." I learned later that he found by a simple test that the man was already blind on that eye. He had been blind for three weeks. There was occlusion of the pupil, the eye was totally lost to vision and nothing could be done to restore the sight.

I mention this in order to impress on your minds the importance of making an early diagnosis of eye syphilis, and also that these cases must be treated early in order to get good results.

L. Harrison Mettler, Chicago. I would like to ask Dr. Snyder what in his study and observation has been the frequency of specific neuro-retinitis in cases where there were distinct signs of cerebral syphilis. Personally I feel a very great interest in that question. I had at my clinic very recently a case in which I was unusually interested, and I wanted just briefly to speak of it here. The patient, a man, came to me some months ago after he had been under the care of some of our ablest ophthalmologists for an injury of the eye. He said that during this period he had been given two quarts of castor oil. When he came to me he complained of intense headache starting above the eyes and running around to the back of the head; a little more on the right side than on the left; intense photophobia so that he stood all the time with his eyes covered. The pain in his head was constant; just as bad at night as during the day. He also had slight tingling and formication sensations of an indefinite character, and upon close questioning I elicited the information that he also had slight hemiplegic attacks. That is, little weaknesses in the legs, but not a distinct and pronounced hemiplegia.

I made a tentative diagnosis of central syphilis and asked for a careful and thorough examination of the eyes. Three or four ophthalmologists examined the man. The first gentleman who saw the case made a tentative diag-

nosis of syphilitic neuro-retinitis. He said that it was an obscure case and that under the circumstances he was not ready to make a positive diagnosis. Another gentleman who saw the case concluded that the fundus was perfectly normal but that there was some peculiar condition of the retina which he could not fully account for; there was nothing of an albuminuric character but there were some slight spots of a peculiar nature on the cornea. I had the patient see a third gentleman. He could not see any neuro-retinitis, but said that he had a very slight condition which looked like a post-specific choroiditis. None of these gentlemen, in whom I have the most profound confidence would make a diagnosis of cerebral syphilis.

The man had been given several kinds of treatments by physicians under whose care he had been previously. The man was a conductor on the railroad and did not wish to conceal anything. He told me that his first wife aborted three times and the second lost the first child. I felt that considering everything I was justified in making a diagnosis of cerebral syphilis. Hence I put him on iodides and ran him up to three and four hundred grains a day. There was quite an improvement; in fact, he got so well that he went back to his work and made several trips on the train. I continued the iodide until he was taking one thousand grains a day; he bore it quite well for awhile. There seemed to be some variation in his condition. Some days he was better and on others he was considerably worse. I gave him periods of rest from the iodides but could not see that it was doing him any good. I also gave him mercurial inunctions which had been recommended by several of the ophthalmologists, but I could not see that we got any very decided improvement from that.

The man remained under my observation for six or seven months and finally concluded that none of us knew what was the matter with him. I lost track of him. I simply refer to the case as one where the eye symptoms were so marked, and yet I still feel that it was one of those obscure cases of central syphilis in spite of the fact that we did not get more positive results from the use of the iodides, and yet that is not unusual. Therefore, I would like to ask the essayist in what per cent of cases of syphilis of the central nervous system he can depend on having optic neuro-retinitis of a very distinct character. These cases are unusually interesting and it seems as though there is something that we can do for them.

Dr. Snyder (closing the discussion). As to the frequency in which we find neuro-retinitis, I do not think that my limited observations would be of much value, and I am not familiar with the statistics of the subject. A large number of clinical observations are necessary; the experience of any one man is of little value. In regard to the case related by Dr. Mettler, it brings out a point very nicely that I had in mind when I wrote my paper; that is, the distinction between syphilitic and post syphilitic troubles. I saw the case the doctor mentioned and I know that he was on a very heroic anti-specific treatment for quite a long time, but it

did not good. The man grew worse rather than better. In such cases I am in favor of dropping antisyphilitic treatment at once. It is useless to keep it up when no good results from it.

That patient had a very foul breath an evidence of a very bad condition of the stomach and intestines; his vitality was lowered in every way. He may have had a post-syphilitic lesion, but it certainly was not due to syphilitic poison directly as it did not respond to antisyphilitic treatment. We find neuro-retinitis present comparatively often, but I do not know just what the per cent of cases is.

PSYCHOTHERAPEUTICS.*

BY E. A. EDLEN, A. B., B. S., M. D., MOLINE.

There is probably no therapeutic agent with as ancient history as that of suggestion. It must have been employed very extensively before the dawn of history, if we may judge from its frequent mention in the earliest records.

What are the mysterious means of healing by secret performances, cabalistic words, stones, amulets, laying on of hands, prayers, incantations, and such, but psychotherapeutics? These secret means of curing the sick are handed down from generation to generation from time immemorial. In a great many instances this knowledge is kept inviolably secret within certain families and casts, and only to the head of the family, the medicine man, the priest, or chief, this knowledge is communicated. This supposed preternatural power was greatly more taken advantage of in the former times than now, for the reason that all kinds of superstitions were more rampant before the light of civilization dispelled the misty veil of ignorance.

This power of curing by suggestion has not been confined to any certain race or any peculiar place, but is known by all races at all parts of the globe.

The ancient Egyptians practiced it. The Hindoos were well versed in its mysteries. The Jews, the Medes, and the Persians frequently employed it. The Indians and the Negroes resort to it in most diseases. In Europe we find it employed more or less since the most remote times.

No remedial agent has been more used and abused than has suggestion, nor has any

been shrouded in deeper mystery. It is only within recent years that it has been placed on a scientific basis.

The power of suggestion has been a recognized factor as far back as history brings us, but the underlying principle of this power has been but vaguely understood. Students of psychology have within recent years proved its depths and have to a certain extent brought order out of chaos. Many theories have been advanced as to the nature of the psychic phenomena induced by suggestion. It is in the study of these phenomena that we have been able to formulate a marking hypothesis for the scientific demonstration of the fundamental principles of suggestion.

The best theory promulgated is that of Mr. T. J. Hudson. His theory of the quality of the mind is clear and comprehensive. He divided the mind into the subjective and objective. The objective mind has its seat in the cerebrum and takes cognizance of the objective world through the media of the five physical senses, is under the control of reason and develops what we know as common sense.

The subjective mind with its seat in the lower brain (pons, medulla and chord), perceives by intuition independently of the physical senses. It is the seat of emotions, of imagination, and of memory, and performs its highest functions only when the objective consciousness is in abeyance. It controls functions, sensations, and conditions of the body.

The objective mind never accepts anything as fact that is not in accord with reason, or can be satisfactorily demonstrated and is agreeable to the intellectual faculties.

The subjective mind will accept anything that is not contrary to instinct or to previously conceived ethical emotions.

The main point in mental healing is to gain the confidence of the patient. Without this nothing can be accomplished. Another factor which determines the successful issue by this psycho-physical process is the passivity and subjective faith, which is only obtainable upon partial or complete cessation of opposition, active and passive, of the waking consciousness. The objective mind must

*Read at 53d Annual Meeting, Chicago, May 30, 1903

be brought into abeyance enough to lose its normal control over the subjective mind, then the subjective mind will be in increased susceptibility to impressions through suggestion, which will result in relief of pain or cure of disease.

In psychotherapeutics we have to deal mainly with the subjective mind, and for that reason we have to check the controlling factor of the objective mind. It is not necessary to bring the subject into a deep hypnotic state, as we find that suggestions are received and accepted at all stages of consciousness. The mind must only be placed in a condition of receptivity to therapeutic suggestion.

Auto-suggestion is a powerful factor which we have to reckon with in mental healing. It may be an excellent ally—or an indomitable enemy. We have to find out what the auto-suggestion is in order to be able to successfully overcome it, or employ it to our advantage.

Let me illustrate: A man imagined that he had swallowed a snake and that the reptile lodged and boarded in his stomach. He sought medical aid both in this country and in Europe, but nothing availed, he felt the movements of the snake in his stomach and was in a constant distress on account of the strange lodger. The man was perfectly sane in all other respects, but the idea that he had swallowed a snake, did not leave him for the simple reason that he had not seen the snake come out. Finally, a physician ordered him to drink warm milk which he told him the snake would like, and then while the reptile had gone to sleep after the meal, the physician would give the patient a certain kind of medicine which would bring up the creature. This was done, and a green, slimy rod, about five inches in length, was vomited. The snake was viewed with great awe, and the physician was held in great respect for his remarkable skill. The snake, which was nothing more than curdled milk, was preserved in alcohol and placed in view in the physician's office. The patient was instantly cured.

This case illustrates both the power of auto-suggestion and healing by mental therapeutics.

Sometimes suggestions are accepted, although the reasoning faculties perceive the absurdity of the remedy. The subjective mind is unconsciously induced to accept the proposition contrary to reason. A young intelligent man was bothered with warts on his hands. Someone told him to tie a knot on a silk string for each wart and bury the string in some secluded place, and then the warts would disappear in two weeks. He did as he was told, although he reasoned out that such a performance could not possibly have any effect on his warts. To his great astonishment, the warts disappeared within the given time. There certainly was a latent faith in the efficacy of the remedy.

Confidence in the physicians ability to relieve pain is very often the specific remedy. A lady suffering from hysteria, was often attacked with excruciating pains in her whole body and would be writhing in the bed. I was called at all hours. The hysterical element was easily recognized. At the first few visits I administered morphine to allay her sufferings, but I soon noticed that a few moments conversation with her would have the same effect. I soothed her and made her believe that the pains would soon vanish. To make my suggestions more effective I passed my hand a few times across her brow. After a few visits I found that her pains would leave her as soon as I entered. Finally, I suggested that she would have no more of those pains, and after a few sittings she was cured.

Psychotherapeutics is efficacious not only in suffering dependent on unstable equilibrium of the nervous system, but is equally effective in pains dependent on physical infirmities. A young lady was suffering from inflammatory rheumatism. Her pains were great. It was impossible to detect any hysterical element in her. Nevertheless, my presence and the assurance that the pain would be relieved, had a magical effect on her. In a few moments she would be free from pain and fall asleep, as naturally, as if nothing was the matter.

Knowledge of human nature and tact are necessary accomplishments to a successful practice of psychotherapeutics. The suppo-

sition, that mental healing can be applied in the same manner to all persons, whose conditions are suitable for this remedy, is erroneous. It is sometimes a difficult task to make the proper advance, and our failures with this agent in proper cases are greatly due to our own incompetency in the choice of means for the administration. Even the most skillful will sometimes fail on account of not being able to strike the proper key. Having found the proper method of administration, the rest is comparatively easy.

We must also bear in mind that we inadvertently make impressions on the mind of our patients. A word, a look, or a gesture may be interpreted quite differently by the patient, than was intended, and may overthrow all our calculations. The physician must be firm positive, cheerful and hopeful, and impress the patient with the idea that he is able to do good.

Psychotherapeutics has a great range of usefulness. It is potent not only in hysteria and allied states, but it is also remarkably efficacious in functional derangements of the various organs of the body. Even in true pathologic conditions it has its sphere of usefulness. As the subjective mind controls the vasomotor system it determines the blood supply to the various organs by suggestion. We may be able to draw a blister by simple suggestion. Oozing and bleeding of small blood vessels are amenable to the same agent.

The conditions of the alimentary tract are easily dominated by suggestion. Vomiting of pregnancy, hicough, colic, constipation or diarrhea are readily relieved. Diseases of the respiratory system can be greatly ameliorated by suggestive therapeutics.

In suggestion we have the ideal anesthetic, an agent, which leaves no unpleasant after effects, which abolishes pain, without necessarily rendering the subject unconscious. It is undoubtedly true, that many persons cannot be brought under sufficient control at the first seance to render them insensible to pain, but a few sittings will generally accomplish the purpose.

This powerful therapeutic agent has been in the hands of charlatans and quacks long enough, and ought to be taken out of their

hands and employed scientifically by the medical profession. If the physician would add this agent to his armamentarium, the mysticism, in which it is shrouded, would be dispelled, and the prop of christian science, faith healing, and Eddyism would be knocked to the winds.

Discussion.

L. Harrison Mettler, Chicago:—We are indebted to the doctor for bringing this subject to our notice, because I believe that as practicing physicians we confine ourselves to the prescription or scalpel, and by doing that we do harm to our patient in many instances and fail to accomplish results that we might otherwise accomplish. I do not suppose that there is anyone in this room but what is willing to admit that in every disease, whether organic or inorganic, every disease in which there is more or less suffering, that the mind is equally affected, more or less. And yet you will prescribe for the intestines, you take out your scalpel and remove tumors, forgetting entirely that it is the patient who is suffering and not merely the tumor or the bowels, nor the lungs, but it is the mind as well. While these other conditions must be attended to, yet our duty is not complete unless we minister to the patient's mind at the same time.

There are many different phases to the study of psychotherapeutics as a means of treating diseased conditions. I believe that the English school exaggerated considerably, and I am convinced that Charcot in his teaching was thinking of hysteria and minor mental conditions when referring to psychotherapeutics. But we ought to consider and bear in mind that our personal influence in the treatment of patients goes a great ways toward producing the desired effect and bringing about a cure. Take massage, electricity, baths, etc., I believe fifty per cent. of the good results we get in these cases are due to our personal influence, that is, psychotherapeutics. I am convinced that electricity, no matter what form is used, that three-fourths of the benefit obtained from its use is obtained by suggestion. I use it right along in my practice and find it extremely useful.

There are two points in connection with this subject that I wish to urge upon you for your consideration. We should remember the mind of the patient and influence it in every case. That will be the very best method that we, as a profession, can adopt at the present day in order to wipe out of existence the quackery that is so rampant, especially in the larger cities; the quackery of hysterical religion. They are taking the mental cases that we are ignoring; and they are doing them some good; many of them are being cured. Yet we are the only ones who should treat them; the medical men, the men who are licensed to treat disease, but we should treat mind and body alike. We ought to give some consideration to psychotherapeutics as a means of treating disease in its broadest sphere.

In the second place, we ought to use it because with it we can accomplish results that cannot be accomplished in any other way, especially in that class of cases known as neuroses. I remember one case of hysteria that came under my care recently. The patient also had marked neurasthenic symptoms and was thought to be on the verge of insanity. She raved, was excited, could not sleep at night, could not eat. She also had an eruption of an eczematous nature on the face. I have never seen such a severe case of what would be called nervous prostration with marked mental phenomena and a certain number of hysterical symptoms. I put her in a private hospital for a week or ten days and I tried everything I could think of in the line of drugs to keep her quiet but failed. She gave us a great deal of trouble. Finally I said to the patient "see here; you are either sane or insane. If you are sane you will keep quiet and sleep tonight and begin to improve; if you are insane we will have to take you to the asylum in the morning." The nurse came to me the next morning and told me that the previous night had been the first night that they had had rest and quiet. And from that moment, although I do not know whether it was the suggestion, the patient began to improve and today she is as healthy and well as she ever has been.

In many cases by appealing directly to the mind, forcibly if you please, or the best way you can, you can achieve results that you cannot achieve always with the prescription or the scalpel, and I think that in a broad way the question of psychotherapeutics is well brought before this section at this time. It certainly has not received the consideration at the hands of the profession which it merits, nor should it be looked upon as the property of the quack for it is not. It is a part of the treatment applicable to disease and to the medical profession belongs the privilege to use it.

RELATION OF DRUGGISTS WITH PHYSICIANS.

At the last meeting of the Illinois Pharmaceutical Association the committee on Trade Interests in its report made the following reference to the medical profession. As it is of particular interest to our members we give this part of the report in full:

Relation with Physicians.

A short time ago some fifty druggists of Hyde Park gave a banquet at the Chicago Beach Hotel, to which 100 doctors were invited. The object of this banquet was to establish closer relations between the two professions. The line of thought followed was similar to that embraced in the agreement between the physicians and pharmacists of Springfield, which was published on page 73 of the report of the proceedings of this association two years ago, and is worthy to serve as a model for all work of this kind. The subjects under discussion were live ones, the papers read were full of practical suggestions and the spirit of

co-operation, confidence and mutual respect engendered was most gratifying and will no doubt redound to the permanent advantage of both the physicians and druggists of that section.

Your committee wishes to present a few of the subjects there discussed and recommend that they be taken up by this association for your thoughtful consideration. It further recommends that similar movements be inaugurated all over the State, to the end that many of the unnecessary and burdensome evils of our profession may be lessened or eliminated by a campaign of education and intelligent co-operation with our friends, the physicians.

These subjects are here but briefly outlined, the train of thought in each instance being simply started, and it is unnecessary to consume the time of this association in enumerating in detail the points, facts and arguments already so familiar to all.

Self Dispensing by the Physician—What Advantages and Disadvantages Does it Possess?

The saving of time, economy to the patient. Making the case fit the remedy, not the remedy the case.

The narrowing of the number of remedies at command.

The substitution of the remedy at hand for some other which better judgment would dictate, etc.

The Tablet Triturate Evil.

All the above evils—the uncertainty of medication, etc., etc.

Prescribing of Proprietary Preparations.

Lack of knowledge as to constituents.

Popularizing them to the palpable disadvantage of the physician.

Placing heavy financial burden on both pharmacist and patient.

Prescribing National Formulary Preparations.

Something the druggist can make and the physician can know about.

In this connection a prominent druggist had on exhibition a number of preparations beautifully made according to the National Formulary, which were very convincing as to their superiority over proprietary preparations, both from a commercial and ethical point of view.

Phenacetine Versus Acetanilid.

Educate the physician to the fact that they are almost identical with the advantage, medically, in favor of acetanilid—let him know that you oppose phenacetine because it is monopoly and costs twenty times what it should.

Anti-Kamnia Versus Acetanilid Compound.

Comment is superfluous.

Counter Prescribing—Its Advantages.

If any, to the druggist—its injustice to the physician—its injustice to the patient.

Refilling Prescriptions and Giving Copies.

(Continued on page 302.)

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Calhoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—Jas. S. Mason, M. D., Rantoul.
Christian County—W. T. Bridges, M. D., Stonington.
Clark County—L. J. Weir, M. D., Marshall.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
De Witt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. M. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jasper County—E. E. Burton, M. D., Newton.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. C. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—J. B. Holmes, M. D., Macomb.
McLean County—A. F. Kaeser, M. D., Bloomington.
Macomb County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackey, M. D., Aledo.
Montgomery County—G. A. Clotfelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.

Pope County—W. S. Dixon, M. D., Rosebud.
Pulaski County—A. W. Tarr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. K. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—A. W. Ball, M. D., Rushville.
Scott County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermilion County—E. E. Clark, M. D., Danville.
Wabash County—J. B. Maxwell, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marion.
Winnebago County—Chas. W. Winn, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyster, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
Aux Plaines Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynaecological—R. W. Holmes, M. D.
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Lodor, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side—Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—Henry F. Lewis, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tivnen, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.
The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

OCTOBER, 1903.

PURIFICATION OF THE WATER SUPPLY.

The latest method which has been devised for the purification of water is that which is being exploited by Siemens and Halske, electricians of Berlin, Germany, and which has been put to a practical test in Wiesbaden and Paderborn. During a visit to Wiesbaden this summer the editor took occasion to look into this experiment and

called upon Herr Halbertsma, Director of the water works. A visit was made to the village of Schierstein where, near the river Rhine, the principal water supply is obtained. Here the ozone generators were erected at a large expense. The plan of the generators is as follows:

The plant contains 48 ozonizers, forming duplicate groups of twenty-four each. A

set of eight ozonizers receives an alternating current of 8,000 volts from a step-up transformer. One pole of the apparatus consists of the cooling water of the glass tube, and is earthed, while the other pole, connected to the transformers, is placed in an inaccessible position, and therefore causes no danger to the attendant. The ozonizing tubes are enclosed in a cast-iron case consisting of three parts: (1) A completely closed central portion, into which are firmly screwed the eight ozone tubes; (2) an upper part, acting as a reservoir and distributor of the air, and (3) a lower part, forming the ozone-collecting chamber. In the upper chamber, removed from all possible touch of the attendant, are fixed the terminals from the transformers. On the floor of the lower compartment are placed the high potential cylinders with their insulating glass rods, and in addition an automatic device to prevent a short-circuit through any leakage of the cooling water. This consists simply of a strip of filter paper stretched across a metal spring. If the filter paper gets moist it tears, the spring opens out and automatically puts that particular ozonizer out of use.

Unfortunately no preliminary tests of the effect of ozone on the particular kind of water found at Schierstein had been made and after the expensive plant had been installed it was found that while the ozone cleared the water of bacteria it, at the same time, liberated a salt of iron which rendered the water yellow and therefore entirely unsuited for the water supply especially of a health resort of the importance of Wiesbaden. It might be advisable for our cities to make some preliminary tests before installing ozone plants to purify the water supply. We know of some where it would probably act as unfortunately as in Wiesbaden.

THE SMALLER GERMAN UNIVERSITIES.

Following the very able editorial of Dr. Denslow Lewis in the last number of this Journal it may not be inappropriate for me to say a word or two in behalf of the smaller universities of Germany. Berlin of course,

being the most populous city in the Empire, and the seat of government, has an immense advantage over the smaller cities as a site for medical teaching. Should a man show especial ability as a teacher, in any branch of medicine, he is very likely to be called from one of the smaller universities to Berlin, and this is probably the goal of his ambition. However, not all the good teachers are found in Berlin, and certain advantages are to be found in the smaller schools of which our readers may be willing to hear. Being somewhat intimately acquainted with several of them I assume to give a brief account of them.

* * * * Every year during the summer vacation a number of the medical faculties give review courses for practitioners lasting two to three weeks and embracing all or nearly all the chairs taught in the school. Some of these courses have been given annually for many years and notably at Jena a large number of practitioners attend. Two valuable courses of this sort are given at Berlin each year, but concerning them we will say nothing as Dr. Lewis has fully covered the ground for Berlin. In Jena the night before the course begins the physicians who have assembled to take the part meet at one of the hotels for a Kneip. Some leader gets up to announce the object of the meeting and after stating his name and place of residence he calls on all those present to introduce themselves in the same way. In this informal way all are made acquainted. American medical men do not get to these courses very often, probably because they do not know of their existence. I feel sure they would attend them, if they did. They are advertised in the columns of the *Deutsche Medicinische Wochenschrift* for several weeks before their occurrence. During the progress of the course one or

more of the professors will probably open up their home for the entertainment of their colleagues and a delightful hospitality, characteristic of the country, is to be enjoyed. On other nights meetings are held at the leading hotels at which speeches are made and songs are heard. As to the value of the courses much need not be said. One essential is the understanding of the language. Very few of these men, learned in many branches of science though they may be, are good linguists and of course can give instruction only to persons who can follow them. If the language be understood much can be gained from the lectures and demonstrations of the masters.

* * *

During the past summer I had the pleasure of attending a course at the University of Strassburg. This place was selected from a choice of three or four, because it was convenient as to time and location. Although the course is hardly as well organized as those at other universities, yet a pleasant two weeks was spent and much profit obtained. Although the borders of the city have been widely extended since the siege still the city is closely surrounded by earthen fortifications and the streets are generally narrow and the city unhealthy because of the density of the population. These disadvantages are at a minimum in the summer time but they should be taken into consideration during the winter. It is probably because of the existence of these mediaeval fortifications that tuberculosis prevails to such an unusual extent, causing quite a high death rate. It is to be hoped that the lessons of the Boer war will be appreciated in the near future and the totally useless embankments removed. Among the professors giving courses of value were Freund, Gynecology; Wolf, Dermatology; Landolt, Ophthalmology; Krafft, X-Ray

Investigations, and Gerhardt, Internal Medicine. The closing of the course was celebrated by an evening at Germania, the leading restaurant where speeches and good cheer prevailed until the early morning hours and a flash light photograph of the assembly was taken.

* * *

To those of our readers who understand the language a delightful two or three weeks may be spent in attendance on one of the summer vacation courses at the smaller German universities.

Correspondence.

NATIONAL BUREAU OF MEDICINES.

San Francisco, Cal., Sept. 21, 1903.
Editor Illinois Medical Journal,
522 Capitol Ave., Springfield, Ill.

Dear Sir: Please allow me to call attention to an error which appears in your September number, and which I trust you will correct in a subsequent issue.

On page 248, under the caption "National Bureau of Medicines," you state that the Joint Committee has received "word that the majority of manufacturers of proprietary medicines favor the movement." As secretary of the Joint Committee I believe that I am pretty well in touch with the actual conditions, and I can assure you that the committee has received no such word and that your informant is entirely in error. Manufacturers of proprietary medicines could have nothing to do with the matter and would not in any event be consulted; the intent of the Bureau plan is to keep up to standard **official** preparations and to have nothing whatever to do with anything intended for use as medicine the full formula of which is not published. It is true that some of the large manufacturers of pharmaceuticals oppose the Bureau, but they do so either from purely selfish motives or because they do not fully comprehend its objects and plans. They all admit at once the necessity for something of the sort, but each claims that he is above suspicion: all the **others** need some supervision, of course!

Thanking you in advance for your courtesy in making this correction, I beg to remain,

Very respectfully,
Philip Mills Jones,
Secretary, Joint Committee.

THE X-RAY IN ECZEMA.

L. A. Ferry, M. D., Geneseo.

In January of the present year, M. L., about fifty years of age, light sandy complexion, blue eyes and light hair, and by occupation, a farmer

applied to me for treatment of an aggravated case of facial eczema of the papillomatous variety. The nodules, of a warty appearance completely covered the face and upper portion of the neck. The growths varied in size from a marble to a hens egg and on the left side beneath the angle of the jaw several nodules had coalesced and formed a tumor two and one-quarter inches in diameter.

I treated the case both locally and constitutionally for several weeks but there was no improvement, in fact the patient was becoming worse. I suggested the X-Ray to the sufferer and he consented to take treatments. I used a soft thirteen inch tube, static machine, and exposed the affected parts twelve minutes, three times a week, the tube being about three inches from the mans face. From the first a marked improvement was noticeable, the nodules began to dry up and the itching and irritation became much less. The hairs in the nodules died and I removed them from the soft spongy masses. After giving nine treatments I discharged the patient as cured. Mr. L.'s face is now as smooth as ever, the hair has returned and one would not know that the man had suffered with such a serious affliction. The field for X-Ray work seems to cover many of the diseases which the human flesh is heir to, more especially in dermatology. Aside from the above I have successfully treated several cases of facial eczema of a mild form. A case of psoriasis, of fifteen years standing, came under my observation. I exposed the affected areas twenty-nine times and at present the lesions are no more, whether this will be permanent time only will show. A bad case of comedo responded to the Ray, improvement being noticeable from the first. In one of my cases of carcinoma, an epitheloma of the lip with involvement of the cervical glands, I believe the Ray saved the man's life, as he never could have undergone an operation. I have noticed in my X-Ray work a marked tendency toward what I call secondary reaction, that is, after giving a certain number of treatments the diseased tissue seems to die and restitution takes place rapidly without more exposures to the Ray.

ORAL HYGIENE IN PUBLIC SCHOOLS AND INSTITUTIONS.

The following action was taken by the National Dental Association at the recent meeting, held at Asheville, N. C.:

Resolved, That it is the sense of the National Dental Association that each Medical College in the United States should include in its curriculum a lectureship on Oral Hygiene, Prophylaxis, and Dental Pathology.

The dental profession feels that with the introduction of the teaching of Oral Hygiene in the Public Schools, which they are striving to accomplish, and the cooperation of medical men who have been specially instructed on this subject, that a great stride will have been made toward the prevention of caries of the teeth, not to mention many other good results to the general system, which would surely follow a better care of the oral cavity. This commendable effort on the part of the dental profession should have the active support of the medical profes-

sion. We are pleased to call the attention of our members to it.

Dr. F. W. Stiff, 2101 Church Hill Ave., Richmond, Va., is the chairman of the committee which is urging this reform.

State Items.

O. A. McIntosh, Rush Medical, '03, has located at Pleasant Plains.

Dr. J. H. Chew returned from his European trip September 1st.

Dr. C. P. Colby, University of Pennsylvania, '03, has located in Springfield.

Dr. J. H. Hoelscher spent a three weeks vacation in northern Michigan.

Dr. G. H. Simmons spent his vacation at Dr. Billings cottage at Mackinac, Michigan.

J. Auer, late of the resident staff of John Hopkins' Hospital, Baltimore, has located in Chicago.

Dr. Ernest Riebel was appointed an associate member of the surgical staff of the Cook County Hospital.

The North Central Illinois Medical Association will hold its annual meeting at Ottawa, December 1st and 2d.

J. Z. Bergeron and family spent three weeks at Hamlin Lake, Michigan, returning to Chicago, September 17th.

Dr. R. F. Bennett formerly superintendent of the Southern Illinois Hospital for the Insane, is now located in Chicago.

J. P. Denby and bride of Carlinville, have returned from a trip to New York City. Dr. Denby took post graduate work in that city.

Dr. B. W. Hole, of Tallula, contemplates taking a vacation of some months to restore his health, undermined by his arduous practice.

B. H. Portuondo of Belleville, has been appointed consul of Cuba and commissioner to the World's Fair at St. Louis.

Dr. J. H. Davis, of Atwater, sailed Sept. 18, for Europe expecting to study in the medical schools of Berlin and Vienna for a year.

During the recent raid of the gambling houses of Springfield several physicians were placed under arrest. They were probably pursuing scientific investigations on the green cloth. None of them are members of the County Medical organization.

Dr. A. T. Bartlett, of Virden, life member of the State Society, has abandoned his plan of

removing to St. Louis. He will wisely remain in the prosperous little city where he is so well known and highly esteemed.

Dr. F. C. Blackwelder, formerly of Litchfield, who has been practicing for the past year in Roswell, New Mexico, will be married Oct. 7, to Miss Harriet M. Tulewiler, of Indianapolis, Ind. The groom is the son of Dr. and Mrs. J. F. Blackwelder, of Litchfield, where he was born and reared.

At the recent annual meeting of the pharmacists of Illinois three hundred delegates were present. United action towards a reduction of the revenue tax on alcohol was recommended. The law restricting the sale of cocaine, opium, and other drugs was approved. The scarcity of good clerks for drug stores was deplored, and the statement was made that there are not enough registered clerks if the law is enforced.

"Antonius, the Boy Wonder," who plied his nefarious trade as a healer in Springfield and other Illinois cities during the present year has been brought to book in Buffalo, New York, through the efforts of the Buffalo Review. The charge against him was conspiracy to defraud. The judge in passing sentence, said, "I cannot be lenient in this case. The law does not permit people like yourself to impose upon persons whose horizon in life has been narrow and circumscribed, and who are most easily imposed upon. It is necessary in the interests of justice that I should impose imprisonment and the sentence of the court is that you be confined in the Erie County Penitentiary for the period of nine months."

From Urbana comes a peculiar story involving Dr. C. A. Nichols, a well known physician of that city. According to the daily secular papers Dr. Nichols was arrested September 23, charged with unlawfully living with Mrs. Susan C. Day. The physician immediately gave bond and will fight the case. He will claim that Mrs. Day is his wife, a declaration he has maintained for months, but which has been denied by Mrs. Day.

Mrs. Day is said to be in Chicago suffering with a broken leg. She will be placed in a peculiar position if forced to appear.

The Day-Nichols case has furnished numerous sensations for Urbana, beginning when Mrs. Day secured a divorce from William A. Day, assistant to the attorney general of the United States. Mrs. Day some time ago tried to shoot the physician.

Dr. Nichols says he will produce evidence that will show Mrs. Day to be his wife.

The following item of interest to the profession appeared recently in the Illinois State Register. We presume the story to be correct and if so it points its own moral:

Penalty of His Crime.

"The death of Dr. F. M. English, of Mendota, is another illustration of the dangers of law-breaking and engaging in criminal practice. Doctor English was a reputable physician. He had a wife and daughter, enjoyed a large prac-

tice and was worth a hundred thousand dollars. But he was persuaded to perform a criminal operation on a young married woman who endeavored to conceal her shame from her husband. The young woman died in the hospital at LaSalle. When the facts were known Doctor English was arrested for murder and lodged in the calaboose in Mendota. The disgrace was too much for him. Overcome by remorse and dreading the exposure, he took a penknife and severed his jugular vein. When the officer went to call him in the morning he was found in a pool of blood with his fingers grasping a piece of paper on which he had endeavored to write a last communication. It illustrates the foolishness of consenting to perform a crime at the solicitation of the friends of the family. The dead woman was exceedingly beautiful and fascinating. She was just married to a reputable young man but it seems she had concealed her condition. She confided her secret to a female friend and through the instrumentality of the latter Doctor English was employed. Now the woman is dead, the doctor has committed suicide and the female friend is in jail. How true it is that the way of the transgressor is hard, and that the wages of sin is death.

Chicago Notes

Dr. and Mrs. P. S. Doane have returned from Harbor Point, Michigan.

Dr. and Mrs. Hotz have returned from a visit to Yellowstone Park.

Hugh A. Cuthbertson has removed his residence to 6242 Woodlawn ave.

Dr. H. H. Deming, of Chicago, has returned from a visit to the Island of Cuba.

Oscar G. Wernicke has returned from a two weeks vacation at Beaver Lake, Wisconsin.

Dr. and Mrs. J. C. Gill have returned from a short vacation spent at Woodruff, Wisconsin.

J. F. Biehn has been appointed assistant city bacteriologist vice L. A. Kiernulff, resigned.

Dr. Denslow Lewis after a year's residence in Berlin has taken offices 905 Stewart Building, 92 State street, Chicago.

Abraham Brokaw, of Bloomington, has given a large sum of money, \$30,000, to the Hospital in that city which has been named after him.

L. Slominski of Chicago, who was arrested for criminal malpractice, was released by the verdict of the coroner's jury.

L. Harrison Mettler has been appointed consulting neurologist to the Norwegian Lutheran Deaconess Home and Hospital of Chicago.

Dr. J. P. Houston who was operated for appendicitis has again returned to his practice, after several weeks spent out of the city.

"Father" Claude Basil who has been conducting a "home for boys" in Chicago was recently placed on trial on a serious charge before Judge Kersten.

The North Shore Branch of the Chicago Medical Society will hold its first meeting after the summer vacation October 5th. R. B. Preble President of the Chicago Medical Society will address the meeting.

The Chicago College of Dental Surgery has become a department of the University of Illinois. The university has purchased the building and all the college property. A large number of students attend this college.

D. R. Brower, Jr., and Miss Olive Pope Magill were married Sept. 15th at Wichita, Kansas. Dr. and Mrs. Brower sail, Sept. 22d, for Europe where the doctor will spend a year in the study of Internal medicine at Vienna.

J. H. Curtis after an absence of one year in Oklahoma on account of his wife's health, has returned to the city to resume practice. Dr. Curtis was formerly Professor of Materia Medica and therapeutics in the College of Physicians and Surgeons.

Dr. Ralph S. Porter, formerly of Chicago, has recovered from the severe wounds received in the Philippine war and recently passed the examination and received a commission in the regular army. He has been in the volunteer service since 1898, the year of his graduation at the Chicago Medical College.

The University of Chicago has added a large amount of real estate to its holdings on the south side of the midway plaisance. The property is intended ultimately as a site for the Rush Medical College and the hospitals affiliated with that institution. The buildings to be erected will cost more than \$1,000,000.

The following men have been appointed as assistants in the Department of Pathology at the Northwestern University Medical School: Bacteriology, Dr. Victor H. Bassett; General Pathology, Dr. Alexander A. Goldsmith; Clinical Pathology, Dr. G. H. Koehler; Hematology, Dr. George Edwin Baxter; Hygiene, Dr. George B. Dyche. Mr. Geiswold of the Senior Class and Mr. Foster of the Junior Class have been appointed student assistants.

"Mme. Lenormando Besant," "the only and real American veiled white Mahatma," and her husband, Walter Sessions, who is said to use at least six other names with "M. D." attached, were restrained by Judge Seaman of the federal court recently from selling a patent medicine under an alleged fictitious label. Hundreds of these labels were seized in the flat of the couple, 1453 West Madison street, Chicago. The order followed the filing of a bill by C. I. Hood, of

Lowell, Mass., manufacturer of patent medicines.

The reckless sale of poisons by druggists of Chicago has been condemned by the coroner's jury. At the inquest on the body of Walter Fay who committed suicide by swallowing carbolic acid the jury said in their verdict: This jury recommends that no retail druggist shall sell to any one any poison, in any form, except with an order or letter from some licensed and practicing physician, and explaining why and for what purpose the poison was desired. We also find that the sale of various poisons is carried on in a reckless manner, and we recommend that the proper authorities look into this practice and take radical measures to stop it.

The Dearborn Medical College opened its doors September 1, 1903, for the beginning of its first annual course of instruction, covering a period of forty weeks, ending June 25, 1904. The college building is located on State street near Taylor street. The building is used by the Chicago College of Pharmacy during the day. The special aim of this college is to provide a course of instruction for those who in the meantime must be self supporting. The clinical and didactic work is given in the latter part of the day and evening. Attendance upon the clinics of the Samaritan Hospital are required of the students. The school opens with 125 students enrolled. L. Blake Baldwin is President of the College.

Looking to the better safeguarding of the fund for the antitoxine treatment of diphtheria among those unable to pay for the demedey arrangements have been perfected whereby the bureau of charities will investigate all cases in which the department furnishes antitoxine free on the claim of poverty. This will cause no delay in administration; the case will be treated first and investigated afterward. It is believed that when it is known investigation will follow, greater care will be used in applications and so check abuses of the antitoxine fund. Already in one case for which \$15 worth of antitoxine was asked the applicant refused to take it on learning that the circumstances of the family would be looked into.

As the result of a lawn festival given by the patronesses of the Chicago Union Hospital, 1525 North Halsted street, \$400 was raised for the purpose of furnishing the new annex, which will shortly be able to accommodate forty additional patients. The hospital which was organized in 1901 by members of the Belden Avenue Church, has grown much during the past two years, and the good work done through the institution has aroused the interest of prominent North Side women, who helped to make the lawn festival a success. The raffling off of quilts, pillows and rugs, the handiwork of the patronesses, brought a neat sum, and the proceeds derived from various attractions swelled the fund materially.

The State Board of Pharmacy has made a general denial to the charge of malicious prose-

cution and soliciting hush money made against it by Brendecke and Dahlberg, druggists, at 242 West Randolph street, Chicago.

Brendecke and Dahlberg have been prosecuted for the alleged illegal sale of cocaine. In turn they entered suit for damages and asked that the board and its members be enjoined from instituting further prosecutions. Brendecke declared that Bodemann had offered to withdraw prosecution on payment of money.

In the answer the defendants state that Brendecke and Dahlberg are, or were, "in open, flagrant, notorious, and willful violation of the law in relation to the sale of cocaine." The answer also declared that Brendecke came to Bodemann, asking if there was not some arrangement by which they could continue their sales without polestation, and that he was informed at that time that prosecutions would follow any attempt to evade the law in any way.

The defendants also deny that any combination exists between them and any justices of the peace before whom the suits were brought. The answer declared that the man known as "King" is a reputable person employed by the board to assist in securing evidence.

The Physician's golf tournament was held at the Onwentsia Club, Lake Forest, September 10th and 11th. The following prizes were awarded:

First Day—First Contest: First Flight Winner of the Dickerman Cup, T. Melville Hardy. Runner up, J. W. Wassall.

Second Flight Winner of the Billings Cup, E. Russell Ogden. Runner up, George F. Fisk.

Third Flight Winner of the Henrotin Cup, Franklin H. Martin. Runner up, Wm. A. Pusey.

Second Day—Second Contest: For those who failed to win in the first day's contest: First prize, W. H. Wilder; second prize, T. J. Watkins.

Consolation Cup won by F. J. Walker.

Winner of the cup for the best net score, J. W. Wassall.

This, the second Physician's Golf Tournament was a decided success, and it is the desire of the committee that the medical fraternity should know of the existence of the club, its requirements and purposes. The tournament is an annual event occurring about the second week in September, memberships are open to all reputable physicians in good standing, the membership fee is \$5.00 and the annual dues are \$5.00, this money is used to defray the necessary expenses of the tournament.

Last year the tournament was held at Glen View Golf Club.

T. Melville Hardy was elected President for the coming year and the next meeting will be held at the Homewood Club.

At the Alumni banquet of the Chicago Medical college given June 16, 1903, the following class song of 1903, written by Dr. Healy, was sung provoking great laughter:

MUSIC.

"What harmony is this? My good friends hark!"—Tempest, iii., 2.

CLASS SONG.

To the Tune of "Mr. Dooley."

There is a school on Dearborn street that's known, I'm sure to all
Where callow youths may gather to get wiser every fall,
And there are men to teach them through the long and weary days,
And we're going to sing a song about them and their ways.

CHORUS.

The bunch of doctors, the bunch of doctors,
The wisest crowd Chicago ever knew.
When they get busy, it makes us dizzy
To think what troubles they for us will brew.

Now there is Dr. Davis first, our grave and learned Dean,
Who speaks of rest and ferric salts and far-off islands green.
He's rather gray and rather fat, as any one can tell,
But if you treat your patients as he tells you they'll do well.

CHORUS.

Oh, Dr. Davis! Oh, Dr. Davis!
The kindest man the seniors ever knew.
As now we're leaving, it is with grieving,
For we are forced to say goodbye for aye to you.

Dr. Edwards is the next, the hero of this song,
For he is nearly always right—occasionally he's wrong.
He's rather larger than the rest, most that he tells is true.
When you're in doubt about your grades, then he's the man for you.

CHORUS.

Oh, Dr. Edwards! Oh, Dr. Edwards!
The squarest man the seniors ever knew.
And we'll remember when in tall timber,
The sixty-seven hundred points we tried to learn from you.

Oh, Dr. Murphy is the man to wield the surgeon's knife,
To demonstrate the inmost parts and maybe save a life.
He'll get you down there in the pit and ask you this and that,
And when you're finally all balled up, he'll show you where you're at.

CHORUS.

Oh, Dr. Murphy! Oh, Dr. Murphy!
The smoothest man the seniors ever knew.
So full of learning that we are yearning
To know about one-third as much as such a man as you.

For Joseph Bolivar DeLee, who helps the babies either horn—
We are in a dilemma great—we must choose either born—
We must work quick, we must work fast, we must use extra care,

And before each operation we must do it in the air.

CHORUS.

For Dr. Joseph! For Dr. Joseph!

The cleanest man the seniors ever knew.

So anti-septic that there's no skeptic

But pins his faith upon your notes and you.

Local Societies.

Fayette County Medical Society.—As a news item for the Journal I wish to report that in the trial of the case of Dr. L. L. Morey who was sued for malpractice in the sum of \$15,000, that a verdict was given for \$25. The interest of Dr. C. A. Higinbottom the most important witness for the plaintiff was plainly shown by bringing out the fact in the trial of the case that he had charged \$200 for removing some necrotic bone from the index and little fingers of the man who brought his suit in court as a pauper.

Asa L. T. Williams,

Official Reporter.

The Crawford County Medical Society met in regular session at the office of A. G. Meserve, in Robinson, on Thursday, September 10, 1903, at 2 p. m. The following members were present: Dunham, T. N. Rafferty, Meserve, Firebaugh, Barlow and H. N. Rafferty of Robinson; Fuller and McGowen, of Palestine; Kirk and Mitchell of Oblong; Griffith and McGovern of Annapolis; Illyes of Heathsville; Price of Eaton; Weir of West Union; Jones of Flat Rock; and Messrs. Burner, Kirk and Weir as visitors.

An excellent program of five papers had been arranged, but three of the authors were absent, and the first subject considered was **The Etiology, Diagnosis and Management of Typhoid Fever** by L. R. Illyes. The paper was closed by five conclusions as to the management, as follows: (1) Plenty of water internally and externally. (2) Thorough ventilation of the sick room. (3) Sterilization of clothes and bedclothes by boiling. (4) Avoid company in the sick room, and (5) Make your visits on time. This subject was very opportune and was fully discussed by all members present. Price emphasized the danger of doing too much for the typhoid fever patient. Meserve spoke of the significance of persistent headache with a continued fever as a point in diagnosis. Firebaugh was an earnest believer in the efficacy of cold bathing, while T. N. Rafferty and Meserve paid very little attention to temperature except when excessive and without remission, and then sponged with tepid water.

Mitchell had used acetone in a single instance with apparent good results, but would not attempt to draw conclusions from the one case. H. N. Rafferty mentioned the house-fly and dairymen's milk as frequent etiological factors, and exhibited the chart of a recent typical case, showing a rapid onset, the marked anti-pyretic effect of quinine early in the course, and the rapid convalescence—the temperature falling by crisis, with a distinct *perturbatio*

critica. J. Weir read a paper on **Fistula in ano**. His remarks were short and concise, but covered the ground thoroughly. The paper was fully discussed and the following conclusions reached, viz.: (1) that every abscess in or about the ischio-rectal fossa should be radically treated by early free incision and packing with gauze; and, (2) that when a fistula had formed either for lack or in spite of this treatment of the abscess, the only method offering immediate good results is incision of the fistulous tract in all its ramifications, preferably cutting the sphincter but once and then at right angles to its muscular fibers.

After transaction of routine business, the Society adjourned to meet the second Thursday in November.

H. N. Rafferty,

Official Reporter.

The Champaign County Medical Society met in regular (bi-monthly) session August 20th in Hotel Beardsley, Champaign, Ill.

The session was called to order at 2:30 p. m., with the following members present: S. W. Shurtz, Walker, Wall, Newcomb, Burres, Craig, Powers, Spears, Mandeville, Renfrew, J. A. Hoffman, Martin, Schowengerdt, McKinney, Howard, Johnson, Cushing, Mason, Jennie Lyons and H. C. Kariher were present as visitors.

C. J. Cooper, Rachel Cooper and F. C. Renfrew were elected to membership in the Society.

The following physicians applied for membership: Jennie Lyon, of Champaign, Ill., H. C. Kariher, of Champaign, Ill., and A. J. Foelsch, of Bondville, Ill.

The program consisted of a paper on **Small Pox, its diagnosis and treatment**, and its discussion, the one paper occupying all the time of the session not devoted to business.

The author of the paper, Dr. Schowengerdt, showed a clear understanding of the subject, especially did it show knowledge of the modified form of the disease in which it has appeared in recent epidemics. Dr. Burres asked that discussion be limited to the differential diagnosis, especially from varicella. Some of the points brought out in the discussion were of considerable professional value. H. C. Howard gave his experience with Urotropin internally and the inhalation of formalin vapor from a formaldehyde lamp, as a preventative of the disease after exposure. His experience proved the treatment to be effective. He also gave an account of some repeated attacks in the same individual—one having the fourth attack.

Dr. Mandeville's experience proved the possibility of variculous attack without eruption. Valuable points were also presented by Drs. Johnson, Hoffman, Burres, Wall and Martin.

Upon reading a communication from the Secretary of the State Society the members voted upon the proposition to become a branch of the State Society in compliance with the recently adopted constitution and by-laws.

After full discussion the proposition carried, and a question that has been full of perplexity to our Society was finally disposed of. Dr. S. W. Shurtz, Vice President of the Society was chairman of the meeting.

James S. Mason,

Official Reporter.

The Sangamon County Medical Society held its regular monthly meeting September 14, 1903, in the Supervisor's Room at 8:30 with A. L. Brittin, president, in the chair, and twelve members and one visitor present.

The minutes of the July meeting were read and approved. Bills for janitor service and stamps for Secretary amounting to three dollars was allowed and ordered paid.

The application of Charles P. Colby was read and referred to the committee.

G. N. Kreider after making some remarks on the disastrous results of fracture of the spine due to improper handling of the sufferer at the time of the accident, offered the following resolution which was adopted:

Resolved, That coal mines should be provided with stretchers and simple splints which should be used to support injured parts until the patients can be transported to their homes or hospitals for professional treatment.

There being no literary program, the telephone question was discussed, for and against two phones, but not arriving at any conclusion the Society adjourned till the second Monday in October.

Percy Louis Taylor,

Official Reporter.

The Decatur Medical Society for Macon County held a regular meeting in July. Clare A. Garber gave an excellent paper on **The Diagnosis of Typhoid Fever**. W. A. Dixon made a very instructive talk on the **Treatment of Typhoid Fever**. The discussion on both topics was spirited.

At the regular meeting held September 22, W. C. Bowers, of Decatur, read a carefully prepared paper on Eczema.

Wm. T. Moffett, of Blue Mound, was elected to membership at this meeting. Since my last report five cases of Typhoid Fever has appeared close to the river, above the source of the Decatur water supply and constituting a serious menace to the city. Prompt action has been taken by the board of health and the other city authorities and it is hoped that trouble will be prevented.

Lynn M. Barnes,

Official Reporter.

The Winnebago County Medical Society met N. Miller in the chair.

day evening, September 8, 1903. President T. at the Nelson House Ordinary, Rockford, Tues-

The program was opened by Daniel Lichty who read a very interesting and profitable paper on **The Doctor in the Business, Political and Social World**. He plead for a broader education than is afforded by the ordinary college curriculum; that collateral sciences should be added to the present doctor's accomplishments, because the community regarded, and the title demanded a broad culture. Fees are not at all adequate to the "fixed capital" of youths energy, time and money spent, the equipment, betterments and extensions that the progress of the times demands.

Good citizen's civic duties should be the only good doctors political ambition.

His social attitude will rest on his person-

ality, or that of his family and the above attributes. An untainted life secures his present and future success and happiness.

The paper was enthusiastically discussed by Drs. Ransom, Allaben, Starke and Frost. Closed by Dr. Lichty.

Robert C. Bourland read a paper entitled **The Medical Profession vs. Race Suicide**. He said in part: Race suicide is a term embodying all results of any condition, or conditions, maintained by society through action upon a large number of individuals, which work harm to the race either by numerical reduction or mental, moral, or physical enfeeblement. The causes lie within the domain of the law giver and political economist and all are dependent for their existence upon conditions of life connected with a congested population. Hence relief must be sought for in large centers.

The main actual causes are: 1. Increasing celibacy in both sexes. 2. Venereal diseases and their sequelae. 3. Abortion, infanticide and prevention of conception.

The medical profession should manifest its hostility to race suicide by the advancement of public health, public morality and education.

W. B. Helm spoke briefly on the importance of instruction in the Medical colleges relative to the young physician's position on this subject and of the impressions carried away from college in regard to his duties. Also of the part gonorrheal infection played in retarding the propagation of the race.

D. W. Lichty said that he wished to call the attention of the members to the importance of the doctors making use of his opportunities in giving instruction to the people along the line of race suicide. Drs. Allaben, Tuite and Frost spoke more particularly in regard to the prevention of conception. Dr. Tuite taking the ground that the doctor has no right to decide as to when conception should be prevented.

The program committee announced that an opportunity was at hand to get Dr. John Ridlon, of Chicago, to come out here at our next meeting and give us an afternoon clinic and an evening address. The committee was instructed to make such arrangements as they deemed necessary.

After transacting the regular business the Society adjourned.

Chas. S. Winn,

Official Reporter.

The Peoria City Medical Society met Tuesday evening, Sept. 15, 1903, at the National Hotel and was called to order by the President, Robt. A. Hanna.

The members present were: Will, Brobst, Hanna, Kanne, Whitten, Plummer, Waln, Sutton, Kerr, Roskoten, E. L. Davis, Hayes, Marcy, Stephenson, Jeanette Wallace, Frederika Zeller, E. J. Lucas, Hensley, Horwitz, S. M. Miller, Allison and Collins.

E. M. Sutton reported for the committee on a permanent meeting place, that the committee has found a room in the Observatory Building. It was a nice suitable room and could be secured for \$70.00 a year. The committee recommended that the Society secure the room.

M. S. Marcy moved that the report be con-

curred in and the room be accepted by the Society.

A. J. Kanne moved that the committee be authorized to enter into an agreement with the agent of the building for the Society. Carried.

O. B. Will desired the Society to take some action concerning a meeting place for the Military Tract Medical Society, which meets in Peoria in October, and to devise some method for entertaining the Society.

R. A. Kerr moved that the President appoint a committee of three with power to act in the matter, and that this committee solicit funds from the individual members of this Society. Carried.

The President appointed Will, Kerr and Hensley.

A bill of \$10.00 was received from Cole Bros., florists, for floral offering at the funeral of Dr. Robt. Boal.

H. H. Whitten moved that the bill be allowed and an order drawn on the treasury for the amount. Carried.

W. R. Allison read a paper entitled "Who is it?" which was discussed by Kanne, Sutton, Roskoten, Hayes, Marcy, Will, Kerr and Collins. Adjourned.

C. U. Collins, Official Reporter.

The Calhoun County Medical Society held its regular meeting in Hardin, Sept. 21, 1903. Four members were present, P. C. Barry, W. A. Skeel, S. Flatt, T. O. Hardesty. The afternoon was spent in social chat and reporting difficult cases. At 4 P. M. meeting adjourned to meet on December 21, 1903, said meeting to be entirely clinical.

T. O. Hardesty, Official Reporter.

The East St. Louis Medical Society met in regular session on Monday, September 24, 1903, at 8:30 P. M. with President C. F. Whitmer in the chair, C. W. Lillie, Secretary-Treasurer, and members Campbell, W. E. Wiatt, Thompson, Cannady, Stanton, Fairbrother, Hagarty, and Collins present.

Fairbrother reported a **case of gunshot wound** which was quite interesting. The ball entered the chest at the middle of the right clavicle, passed behind the clavicle, first rib and sternum, and out at the anterior border of the left axilla in front of the arm. The left lung was wounded and some emphysema of the left side of the thorax followed, and much ecchymosis of the chest below the wound of exit. Dulness of the left side of chest in the lower part followed, probably due to the hemorrhage. The shock of the wound was not great and the man went on to a rapid recovery being well in six weeks. The remarkable feature of the case is that a pistol ball could pass through the chest in that manner and not wound any great vessel or important nerve.

Campbell reported having made post-mortems on two men who had been shot; one being shot through the heart, both ventricles being penetrated; and in the other case a piece had been cut out of the aorta.

Cannady reported a case of a woman who had been troubled with some menstrual de-

rangement for which her physician had given ergot and viburnum for two or three weeks by which time she was able to get up and about. She soon began to feel a numbness of the feet and legs this being soon followed by **gangrene of the feet**, amputation being found necessary. The patient recovered with a loss of both feet.

Remarks were made by several members on cases of syphilis and the various modes of treatment for this disease.

The subject of a meeting place was brought up and Dr. Thompson was appointed a committee to secure a meeting place previous to our first meeting in October. Adjourned.

C. W. Lillie, Official Reporter.

The Richland County Medical Society held its regular monthly meeting, Tuesday evening, August 25th at 8 P. M. at the City Hall in Olney. The Secretary not being present, J. P. Soliss acted in his stead. This being the annual meeting the Society proceeded to the election of officers for the ensuing year with the following results:

President, W. A. Thompson.

Vice-President, W. E. Fritschle.

Secretary-Treasurer, A. T. Telford.

A. L. Ziliak read a very interesting paper on the subject of **Gall Stones**. The paper was fully discussed by the members present. The committee on program announced that G. T. Weber would read a paper on **Nephritis** at our next regular meeting the last Tuesday in September.

A. T. Telford,
Official Reporter.

New Incorporations.

The Secretary of State at Springfield, licensed the following corporations:

A. W. Severs & Co., McLeansboro; capital, \$20,000; manufacturing proprietary medicines; incorporators, A. W. Severs, W. E. Severs and L. L. Smith.

The Phoenix Hospital association; training school for nurses; Maywood; not for profit; teaching nursing; incorporators, Elizabeth Cooling, Anne Cooling, and Loretta Robinson.

Lou Burke & Co., Bloomington; capital, \$30,000; manufacture medicines and drugs; incorporators, Lou Burke, M. E. Burke, Calvin Rayburn.

Vapor Medicator company, Chicago, capital \$25,000; manufacturing proprietary medicines and articles; incorporators, Harry R. Hurlbut, Samuel B. King and Lillie A. Smith.

For Sale—My property and practice for \$2,000, terms to suit; no opposition, population 250, grand chance for man looking for location. Address,

Dr. J. A. Cravens,
Greene Co. Wrightsville, Ill.

Marriages, Deaths and Changes of Address.

Marriages.

- Jas. V. Cornish, Quincy to Miss L. S. McConnell, Sept. 6.
 Daniel R. Brower, Jr., Chicago to Miss Olive P. Magill, Wichita, Kan., Sept. 15.
 Frederick W. Parker, to Miss Grace E. Peabody, both of Chicago, Sept. 23.
 Evlan Sargent to Miss Winifred G. Crompton, both of Moline, Sept. 9.
 Abraham G. Shortle to Miss Alice S. Mitchell, both of Chicago, Aug. 18.
 Jas. I. Wernham, Marengo to Miss Winifred Patrick, Sept. 9.
 John J. Wuerth to Miss Georgia M. Pitkin, both of Chicago, Aug. 18.

DEATHS.

- Akers, J. W., Jefferson Medical College '71, Curran, Sept. 28, aged 63.
 Austin, K. O., Col. of P. and S., Chicago, '96, Chicago, Sept. 7, aged 38.
 Dick, J. K., Rush Medical College, Chicago, Lincoln, Sept. 20, aged 50.
 English, F. M., Chicago Hom. Col., '86, Mendota, Aug. 31, aged 55.
 Forbes, Jas. M., Chicago.
 Gillette, S. C., Rush College, Chicago, '52, Aurora, Sept. 3, aged 74.
 Springfield, F. M., Univ. of Georgetown, D. C., '81, Chicago, Sept. 12, aged 62.
 Waughop, John W., Long Island Coll. Hosp., Brooklyn, '65, formerly a resident of Tazewell County, Ill., died at sea, en route to San Francisco, Aug. 31, aged 64.

OBITUARY.

Andrew H. Kimbrough, of Danville, who died Sept. 17, in that city was one of the oldest practitioners in the State.

Dr. Andrew H. Kimbrough was a native of Hardin County, Ky., and was born Feb. 27, 1823. He was descended from old Revolutionary stock, his ancestors having taken part in the war which brought independence to the colonies. The line of descent can be traced back directly on his father's side to Gen. Ethan Allen, the distinguished commander of the Vermont troops.

Dr. Kimbrough was a boy when brought by his parents to Edgar county, Ill., where he acquired his literary education. Determining to make the practice of medicine his life work he entered the Jefferson Medical college where he graduated in the spring of 1858. The same year of his graduation he located in Georgetown, Ill., and in 1873 came to Danville. Here he practiced continually and successfully until 1901, when on account of his age and health he was compelled to retire.

Dr. Kimbrough ever kept abreast of the times with the best thinking men of his profession. He read and studied extensively and had the ability to apply with accuracy and benefit to his fellow men, the knowledge he had acquired. He was one of the charter members of the Vermilion County Medical Society, a member of the State Medical Society, and National Medical Society. He was a prominent member of the I. O. O. F. lodge with which he was

identified for over fifty years, being one of the oldest members in the state. For sixteen years he was high priest of the order and for many years was a valued representative of the knights of honor. In politics he was a warm democrat and always kept well informed on the issues and questions of the day. He always refused to accept public offices, preferring to devote his time and energies to his business affairs, which were of an important character and of extensive proportions. Dr. Kimbrough united with the Presbyterian church at Paris, Ill., and at the time of his death was still a member of that church. All his life was devoted to good work and its story is much like the stories of the lives of other good men who have serviceable faculties and an earnest desire to make them useful to mankind. No one can measure the good his service did for this community and he will be long and affectionately remembered.

Changes from Illinois.

- Birch, Edw. L., Robinson to Denver, Colo.
 Menefee, B. K., Oakland to Walton, Ky.
 Swenson, J. G., Moline to Mansfield, Oregon.

Changes in Illinois.

- Artin, A. S., to Ladd.
 Alwood, R. J., to Paxton.
 Ayling, E. K., to Geneseo.
 Boeckins, F. B. E., to Irving Park.
 Brown, C. E., to Rossville.
 Buford, B. D., to Rock Island.
 Campbell, J. Y., to Paxton.
 Carlton, C. L., to Moline.
 Churchill, H. H., to St. Charles.
 Cole, C. E., to Jacksonville.
 Duncan, W. P., to Jacksonville.
 Elliott, Jno. M., Normal to Peoria.
 Fell, E. W., to Jacksonville.
 Freeman, A. E., to Millington.
 Fuller, E. G., to Gardner.
 Gaston, M. Adelaide, Kankakee to Cerro Gordo.
 Gunn, Albert, Oakland to Paris.
 Guelfoyle, T. P., to Mendota.
 Hart, E., to Bloomington.
 Hendricks, E. L., to Morrison.
 Hieber, H. G., to Morrison.
 Holm, E., to DeLand.
 Jeffers, G. N., to Hanover.
 Millhon, H. B., to Owaneco.
 Murphy, W. L., to Rock Island.
 Oakley, J. H., to Cairo.
 Priest, T. W., to Buffalo Hart.
 Smith, C., to Allendale.
 Tombaugh, J. L., to Odell.
 Wheeler, F. R., to Auburn.
 Whiteside, R. R., to Moline.

Changes from Chicago.

- Chichester, J. G., 4705 Indiana ave., to Crystal Falls, Mich.
 Graves, C. H., 287 N. 12th to Canon City, Colo.
 Martin, Eugene, 3919 Indiana ave., to Milwaukee, Wis.

Changes in Chicago.

- Abbott, G. B., to 128 Dearborn ave.
 Archer, I. J., to Masonic Temple.
 Avery, R. W., to Wesley Hospital.
 Beam, H. A., to 2107 Michigan ave.
 Bergstrom, W. G. B., to 64 st. and Stewart ave.
 Bowe, F., to 298 Maxwell st.
 Boys, C. E., to Wesley Hospital.

Brown, E. M., to 254 Ashland Blvd.
 Bryant, J. H., to Wesley Hospital.
 Brown, R., to Mercy Hospital.
 Cheney, V. S., to 1005 E. 51st st.
 Chloupek, E. H., to 1097 W. North ave.
 Clark, J. S., to 302 Michigan ave.
 Cheney, W. T., to 34th and State sts.
 Cole, J., to Mercy Hospital.
 Cook, F., to 8 Oakland Crescent.
 Cooley, W. M., to Michael Reese Hospital.
 Cushway, B. C., to Wesley Hospital.
 Danner, E. F., to 85 Rush st.
 Danforth, W. C., to Cook County Hospital.
 Darling, C. G., to 4356 Indiana ave.
 Davey, J. R., 185 W. Madison to 183 W. Madison.
 Davis, Effa V., 516 W. Adams to 1033 N. Clark.
 Delprat, J. C., to 34 Washington st.
 Dolder, F. C., to 983 75th st.
 Erickson, C. A., to Cook County Hospital.
 Fetherston, E. A., to 550 Wilson ave.
 Francis, F. D., to Cook County Hospital.
 Fyfe, M. B., to 711 W. 43d st.
 Golden, J. F., to Mercy Hospital.
 Grulee, C. G., to Cook County Hospital.
 Harney, L. G., to Wesley Hospital.
 Harpole, W. S., to 103 State st.
 Hollister, J. C., to 100 State st.
 Holmes, Frank, 16 Astor st., to 1228 Wilton ave.
 Jans, E., to Wesley Hospital.
 Kearns, R. J., to 511 S. Lincoln st.
 Kelly, S. G., to 24th and Indiana ave.
 Lawry, C. C., to 2412 Prairie ave.
 Layton, E. N., to 5649 Prairie ave.
 Lobdell, Effie, 169 Clark st., to 165 Locust st.
 Lucas, W., to Provident Hospital.
 Lewis, Denslow, 5160 Madison ave., to 92 State st.
 McDermott, B. A., to Mercy Hospital.
 McDowell, W. S., to 2361 Wabash ave.
 Mack, M. H., 5801 Calumet ave., to 6201 Greenwood.
 Maggard, D. I., to St. Francis Hospital.
 Melzer, G. R., to German Hospital.
 Miller, C. H., 273 LaSalle ave., to 6349 Jackson Blvd.
 Nauman, O. W., to 116 25th st.
 Norris, Julia Ann, 323 Chicago ave., to 7335
 Norris, F. A., to Mercy Hospital.
 Osgood, L. J., to Cook County Hospital.
 Poole, C. V. P., to 4832 Indiana ave.
 Porter, J. B., to Mercy Hospital.
 Rawlings, I. D., to 92 State st.
 Rogers, H. W., to 2007 Michigan ave.
 Runkle, to 2007 Michigan ave.
 Sauer, H. E., to 100 State st.
 Schmidt, K. H., to Cook County Hospital.
 Schussler, H., to 3142 Lake Park ave.
 Sloan, H. H., to 61 Humboldt Blvd.
 Smead, L. L., to 2107 Michigan ave.
 Stevens, C. A., to 1101 W. 59th st.
 Tallman, H. H., to 70 State st.
 Thomas, H. B., to St. Luke's Hospital.
 VanBenschoten, W. C., to 6454 Kimbark ave.
 Warner, W. S., 21 Quincy st., to 702 S. Rockwell st.
 Welch, J. S., to Cook County Hospital.
 West, G. H., to 2251 S. Park ave.
 Williams, R. V., to 449 N. California ave.
 Young, Chas. O., 1667 N. Clark to 481 Cleveland ave.

RELATION OF DRUGGISTS WITH PHYSICIANS.

(Continued from page 290.)

Have an understanding with your physician that his wishes when expressed will be regarded.

Honesty in Filling Prescriptions.

Few druggists are other than strictly honest and trustworthy. There is probably no other calling where the opportunities for substitution and other forms of dishonesty are so abundant and so difficult of discovery, but nevertheless druggists as a class are men of honor and integrity.

The foregoing subjects cover practically the entire range of common ground between the physician and the druggist and afford a prolific and profitable field for exploitation and co-operation along the lines followed by the Hyde Park Druggists.

If in every community in this State a similar movement were inaugurated and followed up we would get fewer prescriptions for Syrup of Figs, Fellow's Syrup of Hypophosphites, Castoria, Hood's Sarsaparilla, etc., and the counter prescribing druggist, the self-dispensing physician, the tablet triturate evil, the phenacetine robbery and the anti-kamnia "con" game would be relegated to the shores of oblivion where they belong.

Certain Pharmaceutical Houses.

While it should be our aim to discourage so far as possible the prescribing of proprietary preparations, yet so long as doctors prescribe them, let us fill such prescriptions with the genuine article.

As you all know certain pharmaceutical houses make preparations resembling in taste and appearance, at least, certain proprietary ones, which, be it said to their credit, they are ashamed to list, but which their representatives are instructed to exploit, as being the same as this, that, or the other thing, not with a view of suggesting to the druggist dishonest substitution, of course. The druggist who substitutes these preparations in prescriptions without the knowledge and consent of the physician is a rogue; the manufacturer who markets these preparations with the knowledge, the expectation and the suggestion that the druggist so substitute is a rascal. He would pose as being honest, yet he would incite the druggist to dishonesty. Nor is that the extent of his offense against decency. After selling the druggist these preparations the same house will send another set of men out among the doctors, to solicit their orders for tablet triturates, etc., urging them to dispense their own medicines, as druggists are dishonest, in fact, they are prepared to say of their own knowledge that druggists make a practice of buying imitation proprietary preparations in bulk which they substitute for the genuine in prescriptions.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 6. }

Springfield, Ill., November, 1903.

{ SUBSCRIPTION
{ \$3.00 A YEAR.

ANAEMIA INFANTUM PSEUDOLEUKAEMICA.*

BY MAXIMILIAN HERZOG, M. D., CHICAGO.

A remarkable state of confusion clouds our conception concerning the disease called by a number of writers Anaemia Infantum Pseudoleukaemia. It is perhaps true as has been pointed out repeatedly, that the anaemias of childhood cannot be as well classified and diagnosticated as those of adolescence; the reason being the peculiar instability of the blood of infants and young children in whom even comparatively transitional disturbances of the haemopoetic organs appear to lead very easily to profound changes in the blood with reversion to an embryonal type and the presence in the circulating blood of more or less numerous nucleated erythrocytes.

The confusion which exists concerning anaemia infantum pseudoleukaemia is largely due to the peculiar manner in which Von Jaksch, who first under this name described an anaemia of early childhood—introduced this subject. Most of the subsequent reporters and authors treating of this form of anaemia begin their considerations by quoting Von Jaksch's article. "Ueber Leukaemie und Leukocytose im Kindesalter" published in 1889 in the "Wiener Klinische Wochenschrift" in which paper the author says:

"I do not want to discuss today the different forms of profound anaemias of childhood, which have up to date, not been well studied, neither from a clinical or an anatomical standpoint. I will, however, in the near future discuss at length these interesting morbid conditions. One point, however, I would like to emphasize today, viz: The boundary lines, limiting the different types of diseases of the blood in childhood, must be laid differently from the boundary lines of these diseases in adolescence.

While the latter diseases in the present state of our knowledge may be limited to the types of chlorosis, leukaemia, pseudoleukaemia and the different varieties of pernicious anaemia, we find among the diseases of the blood in childhood, one which clinically presents the picture of a leukaemia. We have marked swelling of the spleen, the liver, of the lymph glands, permanent leucocytosis of a high degree (proportion of white to red blood cells equal to 1 : 20, 1 : 17, 1 : 12). In spite of this however, the post mortem findings do not show leukaemia. I want to call this type of disease of the blood from the most marked features, as long as we do not know more about it, and in order to distinguish it from leukaemia, *anaemia infantum pseudoleukaemia*. I will later report in detail on the clinical course of and on the anatomical findings in this affection. My observations have established beyond doubt that these cases are by no means rare in childhood and they have probably been repeatedly mistaken for leukaemia."

The reader will expect that the report of a case or cases of anaemia infantum pseudoleukaemia will now follow these introductory remarks, but the author instead, reports at length a case of true leukaemia in a boy 14 months old. This case came to post-mortem later and the pathologist (Eppinger) demonstrated typical leukaemia changes in the internal organs. So we have here a case of true leukaemia in a young child, a case which both the clinician and the pathologist had reported as one of leukaemia; yet most of the subsequent writers have quoted and dwelled upon this case as one of anaemia infantum pseudoleukaemia; hence a good deal of confusion has arisen. Fischl, an Austrian author, who in 1894, only a few years after Von Jaksch wrote on Anaemia Infantum Pseudoleukaemia, already makes the mistake to quote Von Jaksch's case of leukaemia as one of infantile pseudoleukaemia, though

*Read at 53d Annual Meeting, Chicago, May 30, 1903

Koplin, who published an article on the subject of Anaemia Infantum Pseudoleukaemia in 1893 had not fallen into this error. The last extensive article on the disease under discussion, written by Wentworth, likewise contains the mistake of including Von Jaksch's case of leukaemia in an infant, under the tabulated cases of anaemia infantum pseudoleukaemia. After Von Jaksch had called attention to this disease more cases of this type were reported by Hayem and Luzet. The French authors first called attention to the presence of a large number of nucleated erythrocytes; (many with karyokinetic figures) in the circulating blood in anaemia infantum pseudoleukaemia. It was later on pointed out, that the condition to which Von Jaksch first called attention in 1889 had been described previously by Italian writers under the name of anaemia infectiva dei bambini (Infective anaemia of the Infants). There have now been reported about 25 or 30 cases of this type of profound anaemia in children and it has been stated repeatedly that this type of infantile anaemia is not a primary anaemia and a disease *sui generis*, but a secondary anaemia due to a variety of causes and most frequently associated with rickets. From a study of the literature, it indeed appears as if this condition is as a rule met with in connection with rachitis, though a number of cases with the typical blood and other findings did not present any rachitic symptoms whatever.

It appears to us that at the present stage of our knowledge, the main point at issue, is not to decide whether anaemia infantum pseudoleukaemia is a primary or a secondary anaemia, but the importance of recognizing what has been designated by this name and to differentiate it clearly from leukaemia in which the prognosis is absolutely bad, from splenic anaemia in children in which removal of the spleen is probably the best therapy and from primary pernicious anaemia in which the prognosis is likewise very bad. Whether true primary pernicious anaemia occurs in children seems to me somewhat doubtful; a case reported as such in the American literature by Holt, is evidently not one of primary pernicious anaemia, but one of splenic anaemia or primary splenomegaly.

The prognosis in anaemia infantum pseudoleukaemia is by no means as bad as that of leukaemia and primary pernicious anaemia. It is on the contrary comparatively good, most cases terminating in recovery.

The general picture of anaemia infantum pseudoleukaemia presents the following features:

The children subject to the disease have generally developed normally, up to a certain age; they then fall behind in development and a progressive anaemia manifests itself. A physical examination shows a much enlarged spleen, a somewhat enlarged liver, not infrequently some enlarged lymph glands. A considerable percentage of the cases presents distinct typical rachitic symptoms; the blood shows a marked diminution of the number of red corpuscles and a reduction in the amount of haemoglobin. Nothing very characteristic about the color index. Marked leucocytosis, sometimes some myelocytes present. Most characteristic is the presence of nucleated erythrocytes, both normo- and megaloblasts. Numerous nuclei of the nucleated red corpuscles show karyokinetic figures.

The case I want to report in this paper was referred to me for a blood examination by Dr. W. S. Christopher to whom I am much indebted for the following history:

August 12, 1902, A. R., female, born April 18, 1901. Received the breast for the first two months of life, however, never exclusively; was weaned when two months old; received condensed milk for four months; then malted milk which was sterilized during the warm weather, but not through the next winter. Gets now a mixture of cream, 12 ounces; milk, 4 ounces; water, 20 ounces; sugar of milk 12 1-2 drachms. The child was well formed at birth. The growth was satisfactory, but slow until August, 1901; since then it became very unsatisfactory. The appetite variable, stools rather often diarrhoeal, then very offensive in smell, marked constipation at times. Dentition began at 10 months, now has five teeth. The child neither walks nor talks; has never had croup or convulsions; skin action very free, especially on the

head, slight facial eczema, also head rashes. The infantile strength is poor, the child cannot turn over alone. Mucous membranes now normal; child has had occasional colds with fevers. The urine is generally high colored and stains the linen; however no chafing. Sleep poor, child restless, however, no night terrors. Mother thinks child has fever much of the time. Activity of the child below normal; mind O. K.; circulation occasionally poor. According to the mother's statement the child developed diarrhoeal bowel trouble about a year ago; since then child has been piny. At present the child has a very large abdomen which contains a tumor in left side, evidently the spleen. This tumor extends three inches below the ribs and well towards the median line; colonic tympanites passes under the tumor (the child has at present a putrid diarrhoea); liver slightly enlarged extends one inch below the ribs. Cervical and inguinal glands enlarged but not very much; muscles very flabby; parietal bones enlarged; ribs beaded; spine rachitic; kyphotic; wrists broadened.

Diagnosis: Rickets.

Ord. - 1 - 2 - 3 - (oatmeal) sterilized orange juice 1-2 oz. daily; beef juice twice daily; phosphorous gr. 1-128 t. i. d.

Examination of the Blood:

The examination of the blood of the child gave the following values:

Haemoglobin	55%
No. of red corpuscles	2,476,000
No. of white corpuscles	29,500
Proportion of white to red....	1:84
Color index	1, ii
Differential count:	
Small mononuclear leucocytes.	40.0
Large mononuclear leucocytes.	13.50
Neutrophile Polynuclear	43.0
Eosinophilies	0.5
Transitionals	3.0
	<hr/>
	100.0%

Among the red corpuscles we find poikilocytes, microcytes, normoblasts and megaloblasts. The nucleated corpuscles are present to a moderate extent about 1 nucleated corpuscle to every 4-500 red corpuscles or about 5000 in each cbmm. of blood. Many of the

nucleated red corpuscles show karyokinetic figures.

The little patient after the examination in August, 1902, was subjected to the medication and diet prescribed by Dr. W. S. Christopher and on April 1, 1903, Dr. B. W. Pratt, Goodland, Ind., the family physician upon my inquiries reported that the child had fully recovered.

The history of this case, the general anatomical and the blood findings, the complication with rachitis and the favorable termination stamp it as a typical example of the condition which Jaksch has first described as anaemic infantum pseudoleukaemia.

Discussion.

I. A. Abt, Chicago:—This, perhaps, is one of the most interesting fields of investigation in the whole domain of children's diseases, and, as Dr. Herzog intimated, also one of the most difficult. The subject of the chronic anemias of infancy is too little understood. As Dr. Herzog said most of these anemias are associated with rickets; that is, they are associated with nutritional disorders. The question is whether or not these rachitic symptoms may not be intoxications depending on some toxic products that produce rickets. For instance, having an intense anemia with only moderate splenic enlargement in the rachitic process. We know, too, that not infrequently we have extensive lymph node enlargement associated with rickets.

The designation "pseudoleukaemia infantum" of von Jaksch has been questioned. Monti and Bergren have rather been inclined to dispense with that term altogether and have made classifications which, perhaps, cover a larger group of cases; in fact, cover all of the anemias which occur in childhood. They say that these chronic anemias may be mild, with leucocytosis or without leucocytosis. And then they have a severe group, a grave group, which they call grave anemias; an anemia with leucocytosis or without leucocytosis. They evidently resorted to such a classification as this after a very extensive study of these cases of anemia. They found that there was a great difference in the blood findings and the clinical course. Some got well in a short time under treatment; some remained sick for a long time, running a chronic course; and a number of them died. So they felt inclined to do away entirely with the somewhat narrow classification of von Jaksch; this pseudoleukaemia infantum of von Jaksch.

So far as leukemia in childhood is concerned, but few cases of true leukaemia have been reported, and there may be a possibility, as Dr. Herzog said in his paper, that the more severe forms of pseudoleukaemia that have been reported as occurring in childhood may have been true cases of leukaemia.

Dr. Herzog, (closing the discussion):—I want to mention one point in connection with splenic anemias. In those conditions the im-

portance of classification lies particularly in the fact that it influences the prognosis and the therapy. When I looked up the subject of splenic anemia about two years ago I found that in nineteen cases the spleen had been removed by operation. It is a well-known fact that when you remove the spleen in true leukaemia you kill the patient; that is, you cut short his life. But when you remove the spleen in cases of splenic anemia it appears that you are probably doing that one thing which will cure your patient. At the time when I went over the literature of this subject the spleen had been removed in nineteen cases of splenic anemia. In one case there was no record of the outcome. In fourteen there was a record of recovery.

This is of course a very good percentage of recoveries. But this good result is only to be expected in splenic anaemia (which also is met in children). In anaemia infantum pseudoleukaemia the prognosis is good anyhow and we do of course not want to remove the spleen. The important point is therefore to make the correct differential diagnosis. It is really immaterial whether we look upon anaemia infantum pseudoleukaemia as a primary or as a secondary disease.

TUBERCULOSIS OF THE VESTIBULE OF THE EXTERNAL GENITALS IN WOMEN.*

BY J. H. STEALY, M. D., FREEPORT.

The reported cases of tubercular diseases of the Vestibule are very few, up to 1898, but three having been reported, as stated by Kelly. A diligent search of the literature at my disposal has failed to reveal further cases, and as a matter of scientific interest to you as well as one of practical moment, I shall undertake to briefly review a case which presented itself to me some months ago, and which I have considered to be of sufficient general interest to present to you. Interesting in view of its rarity, and also in that it may occur that we may have the difficulty of a differential diagnosis between this condition and various other ulcerative processes about the vulva to consider. As to its frequency of occurrence, I may say that in this, as in other diseases, the recorded cases are probably a comparatively small per cent of the actual cases which come into the hands of the surgeon. This is illustrated by the fact that I have had reported to me by correspondence, six additional cases, out of a

relatively small number of observers communicated with. What seems rather remarkable is the fact that these six cases are divided among only three observers, which suggests the thought that the curette and the microscope are not sufficiently used in diagnosing the ulcers of this region. There are three cases reported of extension of a tubercular process from the vagina to the vestibule, by Deschamps, Chiari and Zweigbaum and not, strictly speaking, cases of vestibular disease, but rather the extension by continuity of tuberculosis located elsewhere. Out of some 10,300 gynecological cases in John Hopkins Hospital, as Dr. Kelly informs me, no case of vestibular tuberculosis has ever been presented, although he records one case seen by him, in a patient 55 years old, whose only complaint was that of burning pain following micturition. Upon examination it was found that a single isolated ulcer occupied the whole area of the vestibule not however extending posterior to the urethral opening. He does not state whether it was primary or secondary to a tubercular focus elsewhere, but intimated that it was secondary to pulmonary disease. There are, here and there, recorded instances of a primary focus of tuberculosis in the genitals in general, but the number of such is comparatively small. And the experience that I have had in my case, as you will see, suggests to me the thought that, even more rarely than the records show, is tuberculosis primary in the regions of the genito-urinary system in both sexes. This paucity of primary cases will account for the uniformly unfavorable prognostic light in which genital tuberculosis is viewed regardless of type.

It is generally conceded, I believe, that the gravity of a metastatic process is in no wise dependent upon the size or gravity of the primary lesion, and it is thus conceivable that under certain circumstances even where granted the opportunity of an autopsy, it may be doubtful whether we have a primary or secondary form to deal with. For often, owing to local conditions, the metastatic lesion may far outgrow its progenitor, and the original lesion early become healed leaving but small trace of its existence behind.

We do not pretend at the present day, to

*Read at 53d Annual Meeting, Chicago, May 30, 1903

say that we can invariably definitely locate a diseased focus in any portion of the lung or internal organs by the physical methods now in reach, and to state that such a process is primary because by our senses we are not able to locate other points of invasion, is to my mind, absurd. I desire to call your attention to the fact inasmuch as here, in genital tuberculosis we have a disease which otherwise, if not viewed as secondary, is unaccountably unfavorable in its course, regardless of the extent of its inroads at the time of observation, and the question of type of lesion, whether primary or secondary, bears heavily upon the question of prognosis. And I consider that the only means at our command in determining this question is by the administration of a diagnostic injection of Tuberculin, subsequent to the total extirpation of the diseased regions. In my case, after repeated examinations I was forced to the belief that this was truly a case of primary disease, and yet, some months following the operation, an injection of Tuberculin induced a most decided temperature reaction. And somewhat later I was able to make out a small area in the lower lobe of the left lung, in which I obtained slight shading of the percussion tone, subcrepitant rales, prolonged expiratory sounds and bronchophony, which findings led me naturally, to alter my former opinion and to consider this case too, a secondary one.

As to the reported and recorded cases, no definite after history is obtainable; so that I am not able to state whether other cases ran a course similar to mine in developing later the physical aspects of a hitherto concealed focus of disease. Here we have a case of an apparently local tuberculosis, in a well nourished and otherwise healthy appearing individual with no evidence of other lesions, yet after undergoing operation, developing the latent primary focus. In her case I believe the indication clear as to the operation even had I known it to be a secondary case, in order to relieve her condition, but when the question amounts to one of a hysterectomy or a castration or some similar procedure undertaken merely because we recognize the presence of disease, we should take great care indeed, to assure ourselves that it will

not prove a useless undertaking nor a deleterious one as well.

Mrs. S., of German nativity, married some three months. Her father died of malignant growth of neck, and a cousin with whom she had been associated some years, had a fatal pulmonary tuberculosis. Her husband, a robust German, gave no history of venereal disease, nor of tuberculosis and appeared normal in all ways. Seven months previous to my seeing the patient she had been ill, as she says, with blood poisoning, though no history or evidence of the atrium of infection was found. Her previous operations were limited to an excision, some ten years previous, of a portion of this same lesion, by one of the Staff of the Elizabethan Krankenhaus of Berlin, which was done, she thinks, by cautery. Her general condition was good. Morning temperature of 99 and evening temperature 99 to 100; pulse very irritable, ranging from 100 to 120. The lymphatic system was normal; thoracic and abdominal examination revealed nothing; the blood showed a hemoglobin of 79%; a leucopenia of 4300 and normal percentages, and an erythrocyte count of 4000100. The urine showed no deviations and no results were obtained in a rabbit inoculation of the same.

Her present trouble dates from one year following an injury in the perineum caused by falling astride the rung of a ladder. This injury was attended to by some local physician in a small town in Germany, who found it necessary to take a number of stitches in the wound resulting. She comes to me now with the sole complaint that her trouble interferes with her marital relations, and this seems to be the only subjective symptom. Upon examination I found situated in the whole area of the vestibule a ragged ulcer, extending from 8 decimeters caudad to the clitoris through the whole length of the vestibule and extending one centimeter upon the anterior wall of the vagina. Laterally it had involved the major portions of the nymphae, leaving but the external bases of both, and thus forming an excavation somewhat rectangular in outline 5.5 centimeters long and 3.5 centimeters wide. The edges were ragged and undermined, and the base of the ulcer, of an apple jelly color, had about ten distinct

miliary tubercles upon it. The urethra projected from the center of the diseased tissue, and had externally about 1-2 centimeter of healthy mucous membrane about its orifice. The surrounding tissues of a bluish tinge were but slightly infiltrated; over the right tuber ischii was a patch of leucoderma. A curetted specimen from the base of the lesion showed the B. Tuberculosis in small numbers, and a snip of the tissue inoculated upon the perineum of a rabbit, in 17 days resulted in a localized tuberculosis of the animal giving the B. Tuberculosis in fair numbers in the stained specimen and in smears.

Operation: Beginning one centimeter above the clitoris, an incision was made down and out, including all of the nymphae and a portion of the labia of the vulva, extending down till opposite the center of the vagina, then extending sharply in and through the anterior wall of the vagina. The included tissues were then dissected off of the pubic bone, including the entire clitoris and the urethra was cut through 1.5 centimeters from the meatus and removed. A flap of mucous membrane was now removed from the deep anterior lateral wall of the vagina, swung around and stitched to the anterior edges of the severed urethra. The cut edges were now drawn together and at the lower angle of the wound above the urethra were stitched to its raw edge. A permanent catheter was inserted and left for three days, the bladder being irrigated twice daily with a neutral solution. The patient went into severe shock following the operation, which continued for about eight hours. The stitches were removed in eight days, leaving a very firm and comparatively sightly union, and on the twenty-third day the patient was discharged.

Discussion.

Paul Owsley, Chicago: Mr. Chairman. Tuberculosis of the vestibule of the female genitalia is a rare condition, very little discussed, although tuberculosis occurs in almost every region of the body. Perhaps its infrequency is due to the secretions. Tuberculosis occurs more frequently in the intestines than in the stomach, which has an acid secretion. Rarity of tuberculosis in the vagina may be due to the vaginal secretions. These secretions are often changed, and where this organ with changed secretions is infected by tubercle bacilli, the disease might develop. Vaginal tuberculosis resembles lupus in that it is tuberculosis of strat-

ified epithelium. Recently, in cases of lupus the treatment by the X-Ray has been found of great benefit; in fact, it is perhaps one of the most hopeful of the X-Ray subjects for treatment. In a case like this it might be possible to find the X-Ray of value before resorting to surgical procedure. Of course, where there is urethral involvement, it is a question whether scar tissue following X-Ray treatment might not cause structure which would later require operation.

Dr. Stealy (closing the discussion): It would seem in this case very much as though the origin of the trouble may have resulted after the trauma she received, and she may have had some infection introduced by the physician who attended her the first time. He had used a number of stitches, and it is possible she may have become infected. She had a relative who died from pulmonary tuberculosis.

I would like to ask the speaker (Dr. Owsley) what X-Ray machine he uses. I have tried the X-Ray in a number of cases, probably in a hundred cases, of malignant growths, and not a few cases of tuberculosis of the skin or lupus, and I have still some of them under treatment. But I have yet to have the first case that has been cured by it.

In looking up the history of these cases, as usually given, tuberculosis of the skin is called lupus. That is the way it is classified, and tuberculosis beginning on mucous surfaces we usually call tuberculosis. The number of cases given in the literature are certainly very few, and it is a rare condition.

TREATMENT AND CAUSE OF DEATH IN PLACENTA PREVIA.*

BY P. M. BURKE, M. D., LA SALLE.

The subject of placenta praevia is one of the most interesting, important and tragic in the whole field of medicine. The treatment rests in a recognition of the causes which in fatal cases produce death of the mother. I shall first direct attention to the salient points in the history of nine (9) cases, secondly the cause of death in the fatal cases, and finally the treatment which is naturally suggested by the operation of this cause. These cases are not presented with the expectation of comparing favorably with the statistics of lying in institutions where cases are seen early and can be more safely managed. These were treated under the difficult, trying and unfavorable circumstances which fall to the lot of the general practitioner.

Case 1. Mrs. H., age 42, eighth child. Was called in consultation with Dr. Coutant,

*Read at 53d Annual Meeting, Chicago, May 30, 1903

the attending physician and Dr. B. Z. Applington. The woman had reached full term. She had been losing more or less blood for six weeks previously. For some hours before we saw her she had fair labor pains and was flowing profusely. There were signs of collapse; rapid, small but regular pulse, extremities becoming cold. Vaginal examination revealed placenta praevia complete. The cervix was sufficiently dilated to easily admit the entire hand. Turning was agreed upon. I introduced my hand up along the edge of the placenta into the uterus, ruptured the membranes, and grasping a foot and drawing it down delivery was completed somewhat precipitately, as it was a desperate case and no time could be lost. The child was dead. On removing the placenta coils of intestine were found in the vagina indicating extensive rupture of the uterus. Profound collapse followed and she died in twenty minutes.

Case 2. Mrs. T., age 35, sixth child. A strong robust woman. Was called far into the country to see her without having any intimation of the cause of her trouble. Found her having strong and rapid labor pains and losing much blood. There was complete placenta praevia. The cervix easily admitted four fingers. She had a strong pulse. I had no help except the husband and a neighboring woman, and there was no time to secure medical aid. The surroundings were not sanitary. Fortunately I had plenty of chloroform in my satchel. Administered chloroform. Made greater dilatation of the cervix with fingers and delivered a living child. Placenta was removed soon after. There was quite a good deal of flowing after delivery. Her pulse was 130, slight collapse. I remained several hours with her and when I left the pulse was still 100 but strong and good, and her general condition seemed excellent. I did not think of rupture of the womb. I felt elated at saving the child and presumably also the mother. I thought the temporary unfavorable condition of the mother due to the shock of the operation. Next morning her general condition was excellent, but pulse was still 90. Feeling that everything might not have been done aseptically the day before, as I had to aid in giv-

ing chloroform in addition to performing version, I gave a 1 to 5000 vaginal douche. On injecting about a pint of the fluid she suddenly cried out with intense pain. Vaginal examination revealed extensive rupture of the uterus. She died in three days of general peritonitis.

Case 3. Mrs. D., age 41, fifth child. Complete placenta praevia in all respects same as case 2. Dr. B. Z. Applington was the medical attendant. I administered chloroform. He performed version. Child dead and mother died in five minutes. There was rupture of the uterus.

Case 4. Mrs. B., age 38, fourth child. Placenta praevia lateralis, full term, moderate loss of blood, feeble pains. Tampon of vagina and cervix very tight. In four hours the packing was expelled, good pains and dilation complete. Intra-uterine turning, brought down a foot and proceeding with great slowness and care afterwards delivered a living child. Mother had a good recovery.

Case 5 as Case 4.

Case 6. Mrs. C., complete case of placenta praevia, fifth child. Full term. Intra-uterine turning, child alive, mother recovered.

Case 7. Seven and one-half months gestation, considerable flowing, no expulsive pains, tamponing for 12 hours, then removal of packing, cleansing of parts, some dilatation; ruptured the membranes and packed for four hours. Intra-uterine turning. Child alive. Mother recovered.

Case 8 as Case 4.

Case 9. Strong Austrian woman, 38 years old, fifth child. Full term, placenta praevia lateralis. History of much bleeding for six hours before I saw her. An intelligent midwife sent for me stating the nature of the case. At the time I was at dinner with Dr. R. Herrick and Dr. T. Gillespie. Fully prepared for any emergency we soon reached the bedside.

The case was urgent, fair pains and much flowing, pulse 100 and somewhat weak. I introduced three fingers easily into the cervix. Dilating with the greatest care I soon introduced four fingers. Continuing although with greatest care very slowly to

dilate with the four fingers, I suddenly felt the cervical ring give way. It had ruptured up about two inches. On removing the placenta I found extensive left lateral rupture of the uterus and of the roof of the vagina. Marked collapse. Introducing my hand high up I succeeded in grasping the edges of the rent and controlling the hemorrhage. My assistants introduced saline solution per rectum and subcutaneously. Nitroglycerin strychnia and digitalin tablets 2 hyperdermatically, while I held the womb which was utterly paralyzed. A vulsellum forceps was introduced, the cervix grasped and the uterus pulled down to the utmost degree. With great difficulty 12 strong catgut sutures were inserted and the wound was repaired to my full satisfaction. Packing was applied through the vaginal rent along the uterine tear which packing was removed in 48 hours. The woman made a slow but good recovery. The child was delivered alive, but owing to inattention which was unavoidable it died soon after birth.

A summary as regards results shows four complete cases and five incomplete ones. Three deaths of mother and six recoveries. Seven children delivered alive and two dead. In the first three cases, which proved fatal, the delivery after bringing down the foot, was too precipitate, and that experience suggested the greatest care and slowness in the delivery of the subsequent cases.

Three out of the four cases of rupture died. All of the cases without rupture recovered. Nine cases are not many, but I believe that they are sufficiently numerous to represent the dangers which we may expect to meet in any given number of cases of placenta praevia. In about 1,000 cases of obstetrics which came under my care, in which it was necessary to do many versions attended also with preliminary dilatation, I never had a case of rupture, never had a case of sepsis or death in those versions, but in nine cases of placenta praevia involving the same steps in order to empty the womb four ruptures occurred. This experience proves that while rupture may occur in other cases that the tendency to do so in placenta praevia is very great, indeed, so great is this tendency in some cases that it is perhaps impossible

to avoid the occurrence of rupture. I believe the deaths in placenta praevia that are ascribed to sepsis are mainly due to an undetected rupture, not great enough to cause rapid death but sufficient to produce some leakage into the abdominal cavity and to present a surface for the absorption of septic material that causes death. As regards anaemia this causation of death *per se* may be excluded, if a competent physician is called in time. What I wish to emphasize is that sepsis and anaemia are comparatively controllable factors in the causation of death, but on account of the friable, to a certain extent degenerated condition of the lower portion of the womb rupture in some cases by version is absolutely unavoidable. To keep this in mind, to do everything at every step according to medical, surgical and obstetrical principles to prevent this rupture is the key to the treatment of placenta praevia.

The treatment manifestly consists in emptying the womb as soon as the condition is discovered unless the child is not viable, when operative procedure should be delayed until the seventh or eighth month of gestation, which can be done without danger. The means to this end are version or caesarean section. Version although attended with the dangers I have stated has universal support in the treatment of these cases. The forms of version are Braxton Hicks method and the intra-uterine method. Braxton Hicks method consists in the introduction of two fingers into the cervix and the aid of the other hand externally over the abdomen. The intra-uterine method consists in the introduction of the entire hand into the womb after a preliminary dilatation of the cervix by the fingers or other mechanical procedures. Braxton Hicks method would theoretically seem an ideal one, as it avoids preliminary dilation of the cervix, avoids possible dangers from introducing the entire hand into the uterus and enables the cervix to be dilated by the leg which is pulled through it. However, its use is limited: It cannot be used after rupture of the membranes. It cannot be used in cases of complete placenta praevia, as the thick placenta forms a barrier to our free operation when you go above the edge of the placenta, the position is so high

that you cannot manipulate with two fingers. You are obstructed by the placental portion which you have separated and you are also threatened with the danger of hemorrhage from the surfaces which you have exposed. It is necessary in complete cases after you have separated the placenta to go quickly after the foot and bring it down in order to stop hemorrhage and this you can only do by introducing the entire hand. Furthermore the performance of Braxton Hicks method in many ordinary cases is extremely difficult, if not impossible. In a large abdomen and a large uterus with a great quantity of amniotic fluid, theoretically at least, it would seem easy, but generally there is not a great quantity of fluid and what there is in the dependent part of the womb, the upper part of which tightly grasps the child. On account of this and the thickness of the abdominal and uterine walls external manipulation of one hand with the assistance of two fingers of the other hand in the cervix is very often utterly powerless to accomplish podalic version. On the other hand in the intra-uterine method it is claimed that the preliminary dilatation may rupture the cervix. In case No. 9 where rupture of the cervix occurred so easily during preliminary dilatation it is fair to assume that if the Braxton Hicks method had been successfully performed that the cervix could not have withstood intact the passage of the body and certainly not that of the head, and therefore the situation would not have been improved.

If one can use Braxton Hicks method successfully it should be adopted; but if he cannot do so he should not feel that the case is seriously jeopardized by adopting the intra-uterine method, as the chief strain comes from the passage of the body and head, which causes rupture of the womb, which above all things is to be dreaded.

The critical point is when one foot has passed through the cervix after turning into the vagina. The leg acts as a plug upon which slight traction can be used for a long time without taking the body of the child from the uterus. In this way the breech can be kept in the grasp of the cervix which it effectually dilates, and also prevents bleeding.

In order to prevent the pains now from too quickly expelling the entire body it is well to leave one lower extremity remain in the womb for a considerable time. To avoid a precipitate delivery should be the chief care of the medical attendant. The cord being still *in utero* the life of the child as well as that of the mother is by delay at this stage fully safeguarded.

The subsequent conduct of the case may be left to nature or should be managed with great care. In complete cases, in turning, the hand should be introduced up along the placental edge at any point, but not through the placenta, as in the latter case the head will pull down the placental tissue around it increasing the diameter of the mass that must pass through the uterine outlet and thereby adds greatly to the danger.

Tamponing the vagina and cervix tightly in any form of placenta praevia at any stage, unless the bleeding is so great as to threaten death by delay, is a most valuable factor in the treatment. Caesarean Section in complete cases is justifiable, and I believe the results in the hands of a skilled operator will at least be equal to that of version, if the condition has been early discovered and the patient has not lost too much blood or has not been exposed to the possibility of sepsis through frequent vaginal examinations.

In case of rupture the rent and the uterus should be tamponed, or if any hope of success suggests itself one should attempt the prompt, heroic and skillful repair of the injury.

Discussion.

Charles S. Bacon, Chicago. Mr. Chairman. I think it is very good of Dr. Burke to present these cases, inasmuch as they are interesting and instructive, but I believe that the conclusions drawn by him are not quite definite and positive enough. Experience has shown the great danger of forcible dilatation of the cervix and from extraction of the child shortly after turning, and these dangers should be emphasized and the rules of procedure should involve the absolute prohibition of these practices. One gets the impression that the deaths in two of the fatal cases were due to the rapid extraction of the child, and the danger in the last case was from the forcible dilatation of the uterus. There has been a good deal of objection to the tampon in the management of placenta praevia, but on account of the danger of rapid forcible dilatation of the uterus I believe that, if one has poor surroundings for immediate work, it is

desirable to tampon, if the uterus is only very slightly dilated. The aseptic tampon, firmly applied, will stop the bleeding, will allow some dilatation, and will allow one to make the preparation for a satisfactory turning; then, when the turning is prepared for, dilatation should be carried simply far enough to introduce the two fingers into the uterus. I do not believe the difficulties in the Braxton Hicks turning are so great that they cannot be overcome, but with the patient well anaesthetized, with assistance provided for, if one can choose his time, turning can be done, and then the case should be left entirely to nature, with only so much traction as prevents the hemorrhage, and it should make absolutely no difference what the condition of the child is. The extraction should not under any circumstances be forced. With positive, definite rules, I believe that many cases of rupture of the uterus and death in the management of placenta praevia can be prevented. I think it is perhaps desirable that the new methods of treatment, by means of the metreurynter, should not be advocated for general use, because of the considerably greater difficulty in carrying them out, although in hospitals they can be adopted.

Rudolph W. Holmes, Chicago. The cause of so many deaths from placenta praevia is undoubtedly largely due to the methods used by the men in turning, and then in extracting. One of the most fruitful sources of mortality, to my mind, is the rapid extraction through a partially dilated os. I think there are two general principles or methods of treating placenta praevia. One that is appropriate for the general practitioner, who meets with three or four cases of placenta praevia in a life time. The other way is suitable for those engaged in obstetric practice, and who frequently meet with cases of ante-partum hemorrhage. Now, I do not believe the tampon is the method to be elected by the obstetrician, but for the general practitioner I think a well applied tampon will give the best results. The tampon should be introduced; at the end of twelve hours it should be removed, if the woman is having strong pains. If the tampon is removed, everything should be ready for retamponnade, or for immediate operation. If the os is sufficiently dilated for the hand to pass, the hand should be introduced and version done. If the os is insufficiently dilated, the tampon should be reintroduced, and we should wait, say, for twelve hours, until approximate dilatation is secured, and do the version: it is far better to leave the case to a spontaneous expulsion than rapid extraction. A tape may be attached to the leg of the baby, if it be dead: the operator may then pull upon this tape from time to time, or may pass the tape over the foot of the bed, and suspend to the end a weight of two to three pounds: under the stimulus of the breech pressing upon the cervix spontaneous expulsion will be accelerated. For the man largely engaged in obstetrics, the tampon is not the best method, for the mortality from its use is higher for both mother and child: for such a man wider experience makes him more skilled in obstetric manipulations, so he is better prepared to undertake the more difficult procedures which vouchsafe better results to mother and

child. If the os is sufficiently dilated to admit two fingers, Hicks' version offers very good results for the mother, and fair prospects for the child. There are often potential difficulties in doing Hicks' version: the abdomen may be thick: the uterus may be unduly active—fortunately rare at the time when the operation may be carried out in placenta praevia: the membranes may rupture prematurely which may seriously compromise the technique at unskilled hands, for it does require considerable skill to perform the Hicks' operation, especially in the presence of a disconcerting hemorrhage. There is another way, which is by far the safest for the mother and baby, and that is inserting a Braun or a DeRibes bag within the uterus when the os is dilated sufficiently to permit it, that is it comes into direct concurrence with Hicks' version. When the os is practically completely dilated the character of the pains, type of the cry, and bearing down will offer premonition that the bag is about to be expelled: at this period everything should be prepared for operation, as the bag slips out the operator passes the hand in the vagina, ruptures the membranes if they have not already been ruptured, and does an internal version and then a slow extraction.

Caesarean section ought never to be done in cases of placenta praevia unless there is positive indication on the part of the rigid, or cicatricial soft parts, an exceedingly rare complication in placenta praevia, or on the part of the contracted pelvis, as the mortality from such interventions is worse than a series of badly handled cases.

There is one other point I would like to speak of, and it is this, that bichloride of mercury has been the cause of more harm in obstetrics than any other one agent. As long ago as the time when Lister was introducing antiseptics, he pointed out the pernicious effects of bichloride of mercury in the presence of blood, pus or serum. He showed that it is inert; it is precipitated: is slowly absorbed, and produces mercurial poisoning; therefore, it has no place whatever in obstetrics. Bichloride of mercury is one of the most innocuous clinical antiseptic, unless the man who is using it scrubs his hands vigorously with a brush; that is, you can put your hand in bichloride of mercury solution and keep it there for a long time, and the surface of the hand is simply smeared over with albuminate of mercury. There is little or no penetration beyond that coating of the mercurial deposit. As soon as you begin to manipulate the hand, the coating is broken, and the septic surface of the hand is exposed.

J. Clarence Webster, Chicago: The statistics given us by Dr. Burke are rather startling. Of course, it is always difficult to criticize reports of cases when one has not been in contact with them, but I wish to state that if they are given as an indication of what must be expected in the treatment of placenta praevia, it were better that the paper had not been read here. I have never known rupture of the uterine body as cause of death in cases of placenta praevia treated by the best modern methods. This remark applies to a hospital experience in Germany, Scotland and America.

As to the causes of rupture, I do not intend

to go into them, because the Doctor has well described them. I am surprised that he shows such disrespect for the Braxton Hicks method. He has given a false estimate of the position which that operation holds in obstetrics. I have never experienced the difficulties that he has described in performing a Braxton Hicks version, in either lateral or central placenta praevia under the proper conditions.

I would criticize his statement that the Braxton Hicks method cannot be carried out in a case of central placenta praevia. If the essayist would investigate the procedure, he would find the indication in central placenta praevia is to perforate the chorionic tissue of the placenta until the amnion is reached. Then, through the amnion, carry out the maneuver just as one would through the membranes in a case of lateral placenta praevia. The procedure described by him of forcible dilatation and introduction of the hand should be condemned, as it is liable to cause rupture of the uterus.

I do not recall any case I have seen in which there has been a rupture of the uterus from the use of the tampon properly applied. If slight rupture has occurred, the careful application of gauze is valuable, serving as a mechanical stimulus to the uterine musculature as helping to prevent descent of the intestine into the uterus.

If a tamponade is carried out as a surgical procedure, the danger is reduced to a minimum. The patient should be exposed in the lithotomy posture. The vulva must be opened by specula, and the cervix held by a vulsella. The assistant should steady the fundus of the uterus through the abdominal wall, while a long strip of gauze is introduced so as to occupy the entire genital canal. In every placenta praevia case this procedure should follow delivery, in order that the patient's welfare may be safeguarded.

Charles S. Bacon, Chicago. May I be allowed to say, Mr. Chairman, to Dr. Webster, who was not here at the time, and for fear that he and others may get a wrong idea of my conclusions, that I advocate the use of the tampon in placenta praevia? That is the indication. My objection was to its indiscriminate use in all cases of hemorrhage.

Daniel T. Nelson, Chicago. If there is any type of cases that will cause a physician's hair to turn gray, it seems to me it is his early cases of placenta praevia. Perhaps no more so, however, than his cases of eclampsia, that he knew nothing about, nor had any warning of. I well remember my first case of placenta praevia, and while I know there was not a rupture through the peritoneum, there was a rupture of the cervix, and of the body of the uterus for a considerable distance up, but fortunately there was none of the peritoneum, and the patient recovered without the latter day antiseptic procedures.

What I rose to speak of was how to prevent some of these ruptures. We all know that the cervix is a circle, and that if the dilating body is a corresponding circle in its outline, it is not as likely to rupture unless it is weaker on one side than on the other, as in the case of a placenta attached only to one side. In other words, if it is only partial then, of course, that is the weaker side. If it is central, then the body that

is outlined as a circle will dilate evenly and the cervix probably will not rupture. But how is the descending body to be kept a circle? That is my point. And that is why I was in trouble with my first case. I did not know enough then to keep the hands in this position (indicating), extended over the head, as was so well taught by one of our old obstetricians, Dr. John Bartlett. One of the hands came down in this position, with the hand under the chin instead of behind the occiput, or, in other words, the elbow was projecting at a sharp angle against the cervix where it was tender, and it simply tore right through. By keeping the elbow in its proper position, with the hands behind the occiput in the after coming head and the arms extended, (this can be attended to while you are looking for the foot) and this complication can be avoided again, do not do as I did in another case. Reaching for one foot, I seized it, but it did not come readily, but the other would more readily, and I left the first knee in this position (illustrating), flexed while the other came down, and it caused a similar trouble for me. But this was soon remedied, immediately after, by an operation which the Doctor has described of immediately uniting with sutures the torn tissues.

Gustav Kolischer, Chicago. Any man who reads a paper before this Society in which he relates his failures as well as his successes in obstetrics deserves credit, and we are therefore indebted to Dr. Burke for his paper.

I do not think there is much left to be said. We should express ourselves positively, not only as to what to do, but in regard to what we ought not to do in the class of cases under discussion. **First**, one should not resort to so-called digital or manual dilatation in obstetrics, whether in cases of placenta praevia or not. **Second**, one should not force extractions. The idea brought out, for instance, that in cases of placenta praevia one of our duties is to empty the uterus as quickly as possible is wrong. We should endeavor to check hemorrhage as quickly as possible, and prevent its recurrence, but there is no need of emptying the uterus at once. In cases of placenta praevia the cervix is not degenerated, but permeated and surrounded by venous blood vessels, as in cases of pregnancy. If pregnancy begins around the cervix at the junction of the uterine body, a circle of blood vessels is formed, which is the theory given of placenta praevia. Great care should be exercised in attempting version where rupture may occur, or has occurred. The use of irrigations or flushings in these cases is based on a misunderstanding of the conditions. Let us think for a moment. If we infect a uterus to-day, we disinfect it to-morrow, and it is simply nonsense to talk about infecting a pregnant uterus, because we incur the danger of ballooning it and causing rupture. If there is a subperitoneal rupture, we may rupture the peritoneum which still separates the uterine cavity from the peritoneal cavity.

As to the use of bichloride of mercury, we should not use it in obstetrics. That is one of the principles of obstetric teaching. No one is more susceptible to bichloride poisoning than a woman after she has been confined.

Dr. Burke (closing the discussion): I only have a few words to say in closing the discussion, and I shall try to be as practical as possible. In the first place, I would like to ask Dr. Webster how many cases of placenta praevia, personally he has treated? He is a distinguished obstetrician, and undoubtedly he has had considerable experience in that line.

Dr. Webster: I could not tell you, Doctor, at this moment.

Dr. Burke: I have tried to be perfectly candid in writing this paper, and the keynote of the whole paper is, in cases of placenta praevia, the danger consists in rupture of the uterus. I simply wanted to present candidly a history of my cases without any vanity, to compare favorably with the statistics of lying-in institutions. I presented the question in a candid way, to show how terrible these cases are.

Another thing. I handled these first three cases twenty years ago, and we must remember at that time how studies in medicine and surgery were not so far advanced. A great surgeon about that time, eighteen years ago, said, "I do not think it is possible for surgery to advance any further." But it has.

Our early experience is associated with a wonderful lot of inexperience, and it is on account of that I have presented to you the dangers connected with these cases when things are done precipitately.

So far as drawing and presenting conclusions is concerned, I remember at a medical meeting of hearing a man report 202 cases of diphtheria. This was about fifteen years ago, when there was no antitoxin, and he saved 200 patients out of 202. Other practitioners lost 25 per cent of their cases. This practitioner remembered very vividly the 200 cases he had saved, but he could remember only two patients that had died. There is a good deal of that in statistics.

Another thing about placenta praevia. It is awfully hard, as anybody knows who has had such cases to deal with and death occurs, to tell what was the cause of death. When we have a rupture of the uterus, the organ is utterly paralyzed, and we may have a sudden gush of blood which causes death. In nearly all cases when this occurs it is rupture that the cause of death, and I simply state this, so that it can be avoided, if possible.

THE SECONDARY RESULTS OF CARDIAC DISEASE.*

BY JOHN A. ROBISON, A. M., M. D., CHICAGO.

It is a comparatively simple procedure to diagnose the primary lesions in organic heart disease so far as locating the lesions and determining their nature is concerned, but it is more difficult to trace the effects of these lesions by their secondary results and base a prognosis upon the effects. We know that structural heart changes produce various ef-

fects upon the circulation according to the nature of the structural change, the heart tissue affected, and the degree of departure from normal. We know also that the secondary effects of these changes will make their appearance in a certain well defined order and that the "vicious circle" of disturbed heart action will be established according to the initial point of the lesion, the severity of the damage done to the heart, and the rapidity with which the heart loses its nutrition and dynamic force.

Our duty as diagnosticians and therapeutists, therefore, has only begun when we have completed our physical diagnosis of the patient. It is our further duty to follow the clinical history of the case, and note the varying changes which belong to each individual case. In heart disease it appears to me that certain patients enjoy a degree of immunity to disastrous secondary effects, or more strictly speaking, predispose toward the maintenance of compensation. These individuals will disappoint us frequently when we prognose gloomily, and will often prove that we are poor prophets by living far beyond the time we have allotted them. Only night before last I was called in consultation to see a young girl aged sixteen whom I had seen six years previously in an attack of ruptured compensation, and there was at that time the *cor bovinum* and it seemed almost impossible for the patient to live many months, yet under appropriate treatment the patient has not only lived six years but has been able to enjoy life and go to school, and even now while the most extreme orthopnoea oppresses the little patient there is almost no oedema of the extremities, and the pulmonary circulation is fairly good.

In this paper I had intended to discuss the various stages of congestion which are the result of valvular and myocarditic disease, commencing with the pulmonary circuit, and following the stasis which ensues in the general circuit, resulting in engorgement of the pulmonary, digestive, renal and lymphatic systems, with the accompanying syndromes, but the program has already been long and you are all wearied, and I will spare you this infliction, and will ask you to listen

*Read at 53d Annual Meeting, Chicago, May 30, 1903

to the recital of a case which illustrates the march of clinical events in a case of valvular heart disease where compensation becomes ruptured, and there is in addition to the ordinary sum of clinical symptoms, one which is rare, that is a condition of hyperkeratosis of the legs. I find in the literature mention only of one case, and that was one by Thiory of Brussels reported in 1865 in the *Med. Free Press*.

In the history of the following case you will notice that the clinical symptoms kept equal pace with the degree of competency or incompetency of the heart.

The patient, Mrs. McK., aged forty years, married. I have known for several years and when I first made her acquaintance she was the picture of health, a woman of fine physique although somewhat too obese, with rosy cheeks and active in her movements.

About five years ago she consulted me complaining of shortness of breath on exercise, to my surprise I discovered she had mitral insufficiency and aortic insufficiency with an aortic direct murmur. There was some slight enlargement of the heart with accentuation in a slight degree of the second pulmonic sound. The urine was negative. The patient was advised as to diet, exercise and so forth, and was in apparently good health until two years ago when she was suddenly seized with violent headache, malaise, aching in the back and limbs, vomiting, pain in the precordial region and extreme shortness of the breath. She was confined to the bed three weeks. Shortly after this attack she noticed the limbs began to swell, and that there was a smaller amount of urine passed. The oedema of the limbs progressed and shortly her attending physician noticed the liver was enlarging rapidly and that there was some ascites. With the progress of the dropsy there was increasing difficulty of breathing until finally orthopnoea became permanent and for a period of thirteen months the patient sat in a chair being unable to lie down. This ascitic fluid was during this period twice removed and after the second paracentesis the legs ruptured spontaneously and began to drain very rapidly. They were cared for in the most approved man-

ner but the patient suffered extremely from pain at the fissured points. In fact the pain was so severe that hypodermatic injections of morphine were resorted to and maintained for several months, and these injections had to be increased until finally the dose at each injection was one grain and a half. In other words morphinism was established. About one year ago there appeared at the site of the fissures a peculiar proliferative cell growth involving the horny layers of the skin. This growth rapidly extended around both legs and reached from the ankles to the knees. It was first somewhat soft, and later was hard diffuse and darkly discolored. In time it was so hard and contracting that it constricted the legs and obstructed the return circulation of the feet and caused them to be intensely swollen. There was contraction of the ham-string muscles and marked oedema over the back.

June 12, 1902, the patient entered the Presbyterian Hospital and the clinical examination was as follows: the patient is emaciated, the muscles are relaxed and flabby with exception of the ham-string muscles as already mentioned. The face was pale and anxious in expression, the lips and conjunctivae congested, and the eyes were dull and listless. The skin was negative with the exception it was shiny in the oedematous portions of the body, and there was the eruption on the legs as noted.

The pulse ranged from 60 to 72, and was intermittent, of small volume and there was high arterial tension. The respiratory murmur was normal with the exception of the region of the right side extending down from the eighth rib where the respiratory murmur was diminished and the percussion note was dull. The area of heart dullness extended laterally from one inch to the right of the sternum to the anterior border of the axillary fold on the left, vertically, from the second rib to the sixth intercostal space below, where the apex beat of the heart was found one inch to right of the axillary fold. The apex beat is diffused, feeble and irregular. On auscultation, the first sound of the heart is less intense than normal, higher pitched than normal, and accompanied by a long, soft blowing

murmur propagated to the left.

The second sound is higher pitched, especially the pulmonie second, and at the aortic area is accompanied by a harsh diastolic murmur, propagated slightly downward. There is also a murmur during systole at the base.

The outline of the liver is made out with difficulty on account of the ascites, but extends at least two inches below the costal border.

The patient is in a state of stupor owing to the morphine.

The amount of urine in twenty-four hours varied from 600 to 1200 c.c. There was a slight trace of serum albumen, with numerous hyaline, and a few granular casts, and an occasional fatty cast, many epithelial cells leucocytes and a few erythrocytes. Total solids, 39.14, urea, 2.1%, 12.6 grams in 24 hours.

At three periods during five months the patient was apparently on the verge of collapse and was momentarily expected to die, but each time rallied, until October 5, when she was tapped and 7000 c.c. of ascitic fluid removed from the abdomen. From this time until the patient was discharged November 11, she improved very rapidly, the ascites entirely disappeared and the legs became free from oedema. The skin lesions began to disappear, and gradually the patient was able to walk about with the aid of crutches. At the present writing the legs are free from eruption and the patient has continued to improve and the compensation of the heart has apparently become almost perfect.

The urine is free from evidence of secondary nephritis, the liver has lessened in bulk, the patient is bright mentally and is able to enjoy life.

The treatment consisted in first, overcoming the morphinism by the gradual reduction method, second, increasing the nutrition of the heart by rest, massage, diet and digitalis, third, removing the girdle-like hyperkeratotic lesions by the use of an ointment composed of thirty grains of salicylic acid to the ounce of vaseline the nurses carefully picking off the exfoliations with dressing forceps and applying moist borie dressings. The limbs were daily massaged and manipulated and

the patient encouraged to use them as much as possible.

The points of interest are the reestablishment of cardiac compensation in a case apparently hopeless, and the peculiar form of skin lesion, which was free from any evidence of bacterial invasion.

COCKROACHES AS CONVEYORS OF TYPHOID INFECTION.*

BY ROSA ENGELMANN, M. D., CHICAGO.

Chicago Health Dept. Inspector; Asst. Clinician, Prof. Pediatrics (Extra Mural) Rush Medical College (Chicago University.)

In the present trend of the bacterial genesis of disease, we have in a measure lost sight of vermin as tributary infection carriers. This is my excuse for presenting the history of a house epidemic of typhoid fever, that in the opinion of Dr. Edward Wells and myself was spread by cockroaches. I can find no other record of such portage in the literature.

Flies, mosquitoes, fleas, bedbugs and cockroaches belong to the same large family and order of insects. Some of these, the latter excepted have been shown to be not only accidental, but also active or intermediary hosts of various germs such as the Eberth bacillus and its allied germ bacillus pestis. Kitasato and other Japanese observers recently found that fleas and bedbugs are both accessory and active factors in the spread of the pest. Fleas, bedbugs and flies have long been discussed as transmitters of typhoid fever and even of scarlet fever. Cockroaches may become and often are as omnipresent as the cosmopolitan bedbug. If flies, fleas and bedbugs are disease breeders and carriers, why not cockroaches, that above all other pests are sewer and water inhabitants and hence direct accidental carriers of the typhoid bacillus, let alone the possible active and intermediary host of the same. The attention of bacteriologists needs to be called to this latter fact and the question decided by them.

Before going into the details of this house epidemic, I should like to call your attention to these Health Department Maps as illustrative of the distribution of typhoid in our last summer's epidemic.

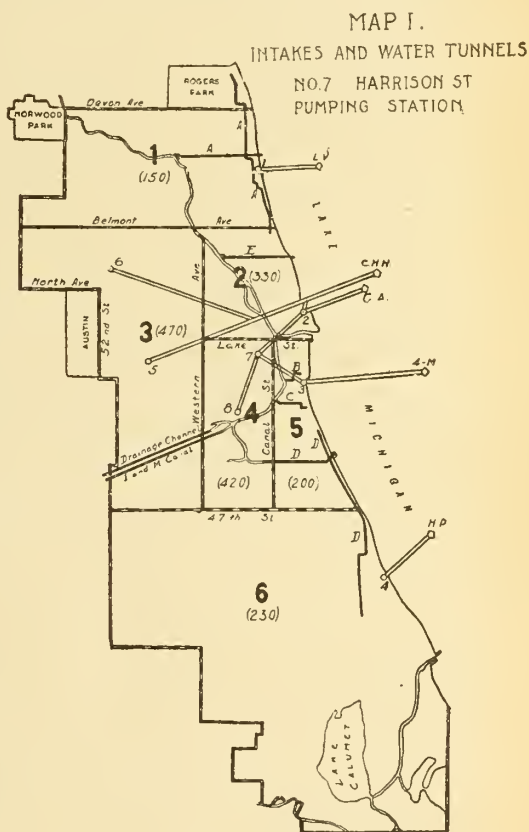
*Read at 53d Annual Meeting, Chicago, May 30, 1903

In Alice Hamilton's recent description of Chicago's water supply and sewage conditions she does not include the territory outside of the sanitary drainage district, viz: the 33d and 8th wards or South Chicago with nearly 72,000 inhabitants. A location almost constantly submerged with sewage, and its soil contaminated from back yard privies, imperfectly constructed and broken sewers. Sewage conditions even worse, if possible, than that which obtains in the 18th, 19th and 9th wards, the centers of her investigations. Her careful experiments proved flies to be accidental carriers but not intermediary hosts of the typhoid bacillus, for positive cultures were grown from the feet and none from the excrement of flies caught in typhoid infected premises and bottled into culture tubes. Her work and that of others both abroad and at home, especially during our late war, is so conclusive as to the genetic relation of flies to typhoid infection, it seems strange that fleas, bedbugs and cockroaches have heretofore neither been suggested nor studied in a similar relation. These pests, the cockroach excepted, are known to convey the plague, why not therefore its allied disease, typhoid fever? Further, the cockroach, a constant water and sewer inhabitant liable to even closer contamination than the other insects, would appear not only a possible, but also a probable cause of typhoid fever, especially in crowded insanitary, uncleanly districts, where food pollution is not unusual, when cockroaches and other vermin overrun the premises.

The territory described by Hamilton is congested and pest ridden. Its water supply from the Chicago Avenue, Carter Harrison and 4 mile tunnel, in July and subsequently was known to be typhoid infected and even though we acknowledge vermin as contributory agents we must not forget the primary cause, viz: water contamination. It is now known that in June the Harrison street pumping station well was polluted through the backing up sewage through a connection for carrying off condensed water from the engine. The heavy rainfall and the absence of the cap over the well add to this pollution. Map I. shows the distribution through the above pumping station (No. 7) corresponds

to the badly infected area shown in Map II. A by pass at station 7 (the Harrison street pumping station) protected station 8 from this serious epidemic. South Chicago (the 33d and 8th wards) likewise a large, poor and insanitary quarter of the city, offers a contrast to the 18th, 19th and 9th wards above described as to typhoid incidence. See Map II.

Note the absence of typhoid fever in this 33d and 8th wards, almost constantly sew-

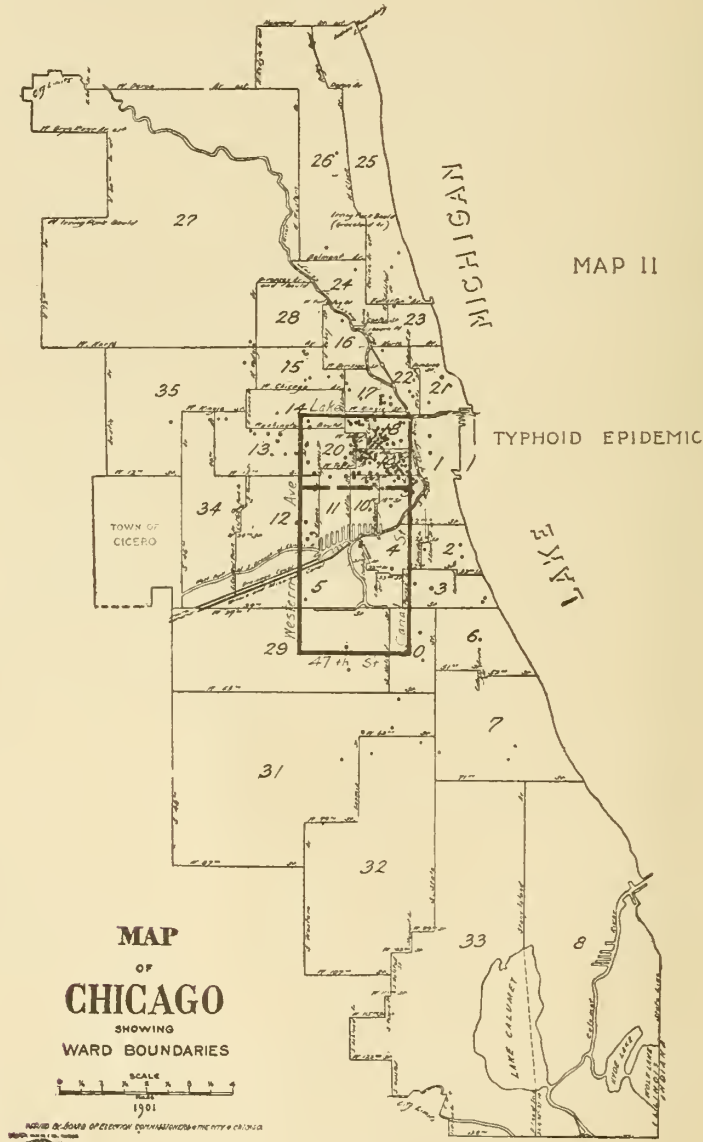


age soaked, and undrained. How then shall we account for the epidemic in the 1st district and its absence in the latter? The sewage conditions were similar but not the water conditions, for the only pollution of the Hyde Park Intake furnishing this latter district took place March 12th after a heavy rain fall and a southeast wind that drove South Chicago's sewage into this crib. Furthermore, I account for the relative absence of typhoid in South Chicago from the fact of its com-

parative freedom from fleas, bedbugs, cockroaches if not flies. The houses even though unscreened, are newer, smaller, more widely separated and better kept than those of their comrades in the 17th, 18th, 19th and 9th

latter in addition to its contaminated water supply.

These facts and the occurrence of a house epidemic of typhoid in a high class apartment in one of our best neighborhoods is offered



wards working against great odds as to vermin extermination, consequently the absence of vermin and subsequent food contamination in the one and the presence in the other case was the cause of the typhoid excess in the

as corroborative clinical evidence with reference to cockroaches and other vermin as subsidiary instruments in the extension of this water borne disease.

In October, 1902, upon complaint of Dr.

Wells I was ordered by the health department to investigate this house epidemic that in five months had claimed as many victims. The patients lived in a large eight flat building. A similar and adjoining building was furnished by a common artesian well water supply, general, and janitor service. Its inmates unlike those of its neighbor were and had been healthy for two years.

Another peculiarity was the fact that the typhoid cases with one exception were confined to the south tier of apartments and occurred in four families.

Case 1, a severe one, occurred in June. A delicate woman depressed by sorrow living in the 1st lower flat succumbed. Hydrox water and consumers ice were in use but raw fruits and vegetables were cleansed in faucet water that was likewise in use for mouth toilet and bathing purposes. Milk was supplied by the Borden Co. Two nurses and a competent doctor were in charge with a consequent attempt at proper disinfection of the discharges.

Case 2 appeared in July in the north lower flat opposite the 1st case. A growing lad was the patient. No information as to the domestic life was here obtainable, since at the time of my visit the family had moved, hence the discharges of this case may have infected the catch basins.

Case 3 in the south flat, 3d floor came down with the disease the 1st week in August. A child under two years of age was affected and previous to this time had been healthy. It with its mother had just returned from a six weeks sojourn at a Rhode Island sea coast town that for two years had been free from typhoid fever. Knickerbocker ice, Borden and later Gurler milk were used in this family. The house supply, artesian well water was the beverage in use. There was also careless washing of vegetables, etc., in this family.

Case 4, the mother of the above babe became ill the 1st week in October. A good physician and trained nurse were in charge of both cases.

Case 5, in south flat, 4th floor was reported by Dr. Wells, October 10th. Consumers ice and Hydrox water and Borden milk supplied

this family. Faucet water was used for toilet and culinary purposes. This case, like Nos. 1, 3 and 4 was in the south tier of flats. Why, with one exception, was the north tier exempt?

Cases 1 and 2 in lower south and north flats, were convalescing when the family in the 3d south flat returned to a home that had been closed and uncared for six weeks and by this time was overrun with cockroaches. The same conditions existed for a like period in the 2d floor south flat directly over the home of the 1st patient taken sick.

Case 5, living on the 4th floor south flat complained during the summer to the agents and janitor for relief from a perfect pest of cockroaches. They were on the food and in the beds and all over the drawing room, so that this family were having daily and deadly raids upon these unwelcome guests that not only permanently installed themselves in every room but came up in additional hordes in the clothes baskets when the laundry was brought up from the basement, a place alive with cockroaches. Why was this basement overrun with them while the neighboring basement was exempt? The people in the latter were well and every flat occupied in this second apartment building, while in the first one there was sickness in two families to begin with and later in four with consequent anxiety and housekeeping neglect. The two closed flats above them next became vermin ridden and communicated this condition to the top flat from which the greatest complaint came and in which the last case of typhoid fever appeared.

The source of the infection in the 1st case is uncertain although it can probably be attributed to culinary and toilet use of the city water, that at intervals during the spring and early summer had been turned into the house mains by the janitor when his artesian well pump broke down. He also at monthly intervals turned on the city water into the tank in order to wash it out, for it was less labor to scrub it with city water than to carry up the artesian water from the pump level to a 60 or 70 foot tank elevation. Not alone may the artesian well tank water have

become contaminated but the house mains as well.

This state of affairs ceased with the employment of a new janitor later in the summer who notified tenants when the city water was turned into the house mains. If however, the infection was due in all these cases to the water supply why was there no further incidence of the disease in the other twelve families and why was it almost confined to the tier, directly over the first case unless the cockroach pest was in close relation thereto. Both the artesian well water, freshly pumped and the tank supply were examined twice in October and found typhoid germ free.

The pump connections, piping and drainage were perfect as were the plumbing and sewage connections. Upon repeated complaint of the tenants during the summer the catch basins were finally cleaned in the fall, but not probably until after the cockroaches had carried sewage, typhoid infected from case 1 or possibly case 2 to the food supplies of the other afflicted families. By October the vermin were also beginning to disappear by reason of the effort of professional exterminators. No more cases occurred. During this epidemic the adjacent building had been comparatively free from cockroaches, its flats were continuously occupied, hence good housekeeping obtained; therefore freedom from these water and sewage borne pests and consequent typhoid invasion.

What Homan of St. Louis said in 1901 is pertinent. He asked "Whether a speculative etiology may not have gone astray and that the spores and germs are now being aimed at in disinfection when really the personal parasites of man and beast are the real offenders."

Hence sulphur fumigation for vermin extirpation is indicated at least as supplementary to our present methods of formalin disinfection.

In conclusion let me add that I hope this clinical observation with reference to cockroaches as typhoid carriers will lead to investigation on the part of our bacteriologists and this presumption either proved or disproved.

THE DANGERS OF AN EXCLUSIVE MILK DIET IN NEPHRITIS.*

BY ALFRED C. CROFTAN, M. D., CHICAGO.
Professor of Medicine, Post Graduate Medical College
Chicago.

There is a wide spread popular prejudice in favor of an exclusive milk diet in nephritis. This we owe chiefly to the French school of clinicians (*le régime lacté doit être aussi absolu que possible*, Dieulafoy) and to numerous imitators that this school has educated.

Many of the leading German authorities, are endeavoring to give other rational regimes a fair trial. In this country some of the more careful clinical observers are also beginning to encourage more liberal feeding in nephritis.

The mass of general practitioners, however, and the laity, are still completely under the spell of the older teachings in regard to the necessity of an exclusive milk diet in nephritis. That this is the case is documented by the large number of nephritics who drift to the specialist in large centers with an heroic and at the same time pitiable history of having rigidly subsisted, on the advice of their physician or without it, for months and even years on a diet consisting almost exclusively of milk.

That milk is a useful article of diet in the management of nephritis, probably the most useful article we possess, no one will gainsay; that milk should be given persistently and should constitute a large proportion of the food to be administered in these cases is also conceded; but I emphatically protest against the use of an *exclusive* milk diet in these cases—for such a regime (excepting possibly in very acute cases of nephritis, and then only for a few days) is directly harmful and dangerous to these patients.

I base this arraignment on the following considerations: In selecting a dietary in cases of acute inflammatory or of chronic destructive lesions of the kidneys three indications must be met, viz.:

1. The diet must contain qualitatively

*Read at 53d Annual Meeting, Chicago, May 30, 1903

and quantitatively all that is needed to maintain the general nutrition (nutritive equilibrium) of the patient.

2. The diet must contain as little as possible of materials that in their ultimate passage through the kidneys can irritate the renal epithelia.

3. The diet while sparing the kidney function must not overtax or otherwise injure the function of other organs.

Does an exclusive milk diet meet these three requirements?

1. *The effect of an exclusive milk diet on general nutrition.*

Can full nutrition be maintained on an exclusive milk diet? Theoretically, yes; for a time. But in order to do this enormous quantities of milk must be consumed and even then there is a deficiency of one all-important element, namely, iron. In addition, the normal proportion of the proteids, fats, carbohydrates, mineral constituents and water that make up the average diet is perverted in the sense that relatively and absolutely increased quantities of proteid and of water are ingested; and these two elements precisely, as I will show, should be reduced in feeding kidney cases.

In regard to the deficiency of iron. One might argue that as milk can nourish infants for a year or longer the amount of iron in the milk should be sufficient to fulfill all the demands of the organism. As a matter of fact, however, it has been demonstrated that milk, while it contains exactly the same proportion of calcium, magnesium, potassium, phosphorus, etc., as the ash of the new born animals of the species from which it is derived, contains six times less iron. This peculiar anomaly is explained by the discovery of Bunge that the iron content of young suckling creatures decreases with the age of the animal and reaches its minimum at the time when iron containing food is first eaten. The young animal therefore brings a surplus of iron into the world and is independent of the milk for its supply. This must be considered a wise protective process for the iron compounds of the milk are very liable to undergo bacterial decom-

position in the intestine and hence to escape assimilation.

It may be considered established therefore that milk contains too little iron to adequately supply adults with this element.

Here then is a qualitative deficiency that must by all means be remedied. The lack of iron in the milk can probably in part be made responsible for the anemia that is so common in cases of chronic nephritis who become martyrs of the milk regime.

That the proteids are excessive if an adult is fed on milk exclusively is readily shown by the following calculation.

A normal adult requires approximately 3000 calories per diem to maintain full nutrition. As one liter of milk has a caloric value of only about 700, from 4 to 4½ liters of cows milk would be required to meet the nutritional requirements of the subject. Less would not maintain nutritive equilibrium. This large amount of milk contains nearly 170 grams of proteid, whereas the normal average quantity of proteid ingested by a healthy adult, and the normal quantity required does not exceed 100 grams per diem.

Aside therefore from overloading the stomach and flooding the circulation with enormous quantities of water we force the patient to assimilate and disassimilate nearly twice as much albumin as he is accustomed to and as he requires. That grave dangers accrue to the renal epithelium and the cardio-vascular apparatus from this practice I will presently show.

2. *The effect of an exclusive milk diet on the renal epithelium.*

In determining the effect of an exclusive milk diet on the kidneys it is necessary to establish (1) what urinary end-products are formed from the various ingredients of the milk (2) whether any of these end-products when passing through the kidneys in large quantities are capable of injuring the renal epithelium.

The chief urinary end products of milk metabolism that must be considered in this connection are water, urea and phosphates.

Water: When the kidneys are acutely inflamed, water is retained; the reduction of

diuresis shows that the elimination of water has become difficult. If we adhere, therefore, to the principle of sparing the kidneys, it is bad practice in acute nephritis to force the patient to take large quantities of fluid. All that we can expect to accomplish by this practice is to cause an accumulation of water in the blood and tissues (hydraemia and oedema). At the same time by trying to forcibly overcome the resistance that the kidneys offer to the passage of water, we merely promote the irritation of the kidney epithelium.

The ingestion of fluids in acute nephritis should therefore be limited and not increased, as so many writers advocate. If the patients complain of thirst (and many such cases do) enough water should be given to satisfy the patient's cravings; but the kidneys should at the same time be relieved of the difficult labor of excreting water by promoting the elimination of surplus water through the skin.

In convalescence from acute nephritis and in sub-chronic forms of the disease, diuresis spontaneously increases. This indicates that at this period more fluid may be given with impunity, as far, at least, as the kidney epithelia are concerned. The intake of water should, however, be largely regulated by the outflow through the kidneys. More than one to one and a half litres are never required at this stage. Larger quantities are directly harmful, inasmuch as they must needs overtax the slowly convalescent renal epithelia.

If the patient is fed on milk alone, and if enough milk is given to adequately nourish him, too much water by far is forced to the kidneys.

In chronic forms of nephritis diuresis is usually very free, and it is an easy matter to produce an abundant flow of urine by the ingestion of large quantities of fluid. What benefits the renal epithelia derive from this practice is, however, uncertain. The urine becomes more dilute and the relative percentage of albumin consequently decreases. Whether or not, however, an abundant flow of water through the kidneys exercises an appreciable effect on the absolute total quantity of albumin or on the total excretion of

urinary solids, remains doubtful, according to the careful investigations that Van Noorden, Ritter, Dapper, Mohr and others have carried out. Theoretically one might argue that the renal epithelia will be less irritated if the urinary solids reach them in a dilute form than if they pass through the kidneys in a more concentrated solution.

At best, however, the advantages derived from the ingestion of much water, as necessitated by an exclusive milk diet, are highly problematical in cases of chronic nephritis. This applies, at least, as far as the renal epithelia and the excretory functions of the kidneys are concerned. The disadvantages, on the other hand, accruing to the digestive and cardio-vascular apparatus, are only too apparent (see below).

The abundant ingestion of water as necessitated by an exclusive milk diet is therefore positively harmful to the renal epithelia in acute nephritis. It is apt to retard the healing process in sub-acute forms of the disease and it is superfluous in the chronic cases.

Urea: Urea must be considered an irritant of the kidney epithelium. When the kidneys are healthy, the epithelia respond to this irritation by a copious excretion of urea. As soon as the kidneys become inflamed, they can no longer respond to this stimulus and urea is retained. It appears rational, therefore, to decrease as much as possible the urea circulating through the kidneys. This can only be done by decreasing the ingestion of proteids, for urea is probably exclusively derived from the catabolism of albumin.

I have already shown that on an exclusive milk diet the amount of proteid ingested is nearly twice as great as that normally taken by a healthy adult. The formation of urea is correspondingly increased and more urea than normal clamors for elimination through the kidneys. That this must lead to overstimulation of the diseased renal epithelia is apparent.

In chronic forms of nephritis, with free diuresis, similar objections to the excessive ingestion of milk proteids hold good. For the abundant outflow of water in these cases is by no means always accompanied by a

correspondingly increased output of urinary solids. So that the retention of urea and of other excrementitious solids is to be dreaded in these cases also.

On this count then, too, an exclusive milk diet is to be condemned.

Phosphates: Phosphates are excreted with difficulty when the kidneys are diseased. Milk is very rich in phosphates. In a healthy individual the urinary phosphorus excretion is greatly increased on an exclusive milk diet. If the kidneys are to be spared, the urinary phosphate excretion should be reduced and not increased, as is done by feeding milk exclusively.

This difficulty, it is true, can be partially overcome by adding lime salts to the milk. For the lime phosphate that forms is either not absorbed from the intestine, or, if it is assimilated to a slight extent, is again largely excreted into the bowel; in this way the passage of phosphates through the kidneys can be prevented (see also my article on "The Administration of Calcium Salts in Nephrolithiasis Due to Uric Acid Calculi," Jour. A. M. A., April, 1903).

We see, therefore, that *as far as the renal epithelia are concerned, much water, much urea and much phosphate, all elements that are carried to the kidneys in large quantities when we feed our nephritics on an exclusive milk diet, act as irritants to the renal epithelia and are consequently harmful.*

3. The Effect of an Exclusive Milk Diet on Other Organs than the Kidneys.

Aside from the fact that feeding with milk alone for a long time becomes thoroughly distasteful and even disgusting to the patients, that consequently the appetite is lost and the normal psychic stimulus necessary to perfect digestion is perverted, the ingestion of large amounts of water necessarily mechanical does injury to the stomach, the heart and arteries.

I will briefly speak of the latter alone, and will not elaborate on the effects of continuous dilatation of the stomach and continuous dilution of the gastro-intestinal secretions on digestion and absorption. One should always remember that in chronic nephritis much irritating excrementitious

matter vicariously leaves the body by way of the bowels instead of the kidneys, and that consequently the intestinal mucosa is in an abnormal state of hyper-irritability. Hence the common digestive disorders of nephritis, and hence, too, the danger of feeding on large quantities of milk alone.

In order that the large amounts of ingested fluids leave the body in the urine, the blood pressure must be increased. In view of the fact that in chronic nephritis the heart and arteries are already taxed to their limit and the blood pressure is already abnormally high, the cardio-vascular apparatus should be spared as much, if not more (!) than the kidneys.

This postulate is flagrantly violated when we feed our nephritics on milk alone and flood the circulation with water. I venture to say that death from failure of the circulation is often accelerated by milk feeding, and that life could be prolonged and many nephritics could be made infinitely more comfortable if the practice of exclusive milk feeding were abandoned.

In subacute forms of parenchymatous nephritis and in convalescence from acute nephritis when diuresis is improving but the renal epithelia are still inflamed, the more abundant ingestion of fluids should by all means be compensated by stimulation of diaphoresis: this practice not only relieves the kidneys of the work of excreting water (see above) but it also relieves the heart and arteries of the strenuous labor of pumping and carrying more water than they should be burdened with at this stage of the disease. It is for this reason, I believe, that nephritics often do so well in hot dry climates where the loss of water through insensible perspiration permits free water drinking without detriment to the renal and cardio-vascular apparatus.

We see, therefore, that milk when given alone and in large quantities meets none of the three requirements of an ideal food for nephritic cases.

If it were not for the pronounced prejudice in favor of an exclusive milk diet, it would seem almost trite to adduce all these self evident arguments against the use of

such a method of feeding. Many practitioners, however, I venture to say, still adhere to this dietetic treatment, merely because they are afraid to replace it by other dietaries that have not been so thoroughly tried. As a matter of fact it is a very easy affair to arrange a variety of different dietaries that possess all the advantages that are hypothetically postulated for milk without at the same time suffering from the manifold disadvantages inherent in exclusive milk feeding.

Such a dietary should in acute cases contain a minimum of proteids and of water. A small quantity of milk with cream meets all the requirements, and it is perfectly permissible to underfeed these patients for the short number of days during which the acute inflammation of the kidneys persists. In fact, the withdrawal of all food or at least a reduction of the food to a very small quantity for a few days, is by all means preferable to feeding with large quantities of milk.

In chronic cases a dietary also containing a relatively small amount of proteids (60 to 80 gr. a day are sufficient to maintain nutrition) and a relatively increased amount of fats and carbo-hydrates to make up the requisite 2800 to 3000 calories, with a small amount of fluid (not to exceed 1500 c.c. per diem) meets all requirements.

One liter and a half of milk, plus a quarter of a liter of cream, for instance, contains approximately 50 g. of proteids (equal to 225 cal.) 75 g. of carbo-hydrates (equal 337 cal.) and 150 g. of fat (equal 1350 cal.) or a sum total of about 1912 calories. In order to make up the difference of 1088 cal. a little meat, eggs, sugar, butter, toast, zwieback, rice, fresh vegetables, etc., may be allowed with impunity, care being taken that the caloric value of 3000 is not greatly exceeded and that all articles of diet that lead to the formation of irritating urinary end products (spices, condiments, etc.) are avoided. A discussion of the complete dietetics of nephritis would lead us beyond the scope of this article.

Both the condemnation and the commendation of various dietaries is largely based on theoretical considerations and on *a priori*

reasoning; as a result we find the greatest diversity of opinions among different clinical schools. I do not believe that in the present state of our knowledge, we are able to formulate any fixed rules in regard to the feeding of nephritics. We do not know enough of the etiology of Bright's disease; do not even know whether we are dealing with a primary local affection of the kidneys or a secondary renal manifestation of a general toxemia (due to a variety of different possible causes) affecting other organs (heart, arteries, retinal vessels, nervous system, stomach and intestines) simultaneously. Personally I am inclined to the latter belief.

For the present, clinical experience and the reaction of the sick *individual* to treatment, not laboratory findings and the reaction of the kidney function alone (for I do not consider, for instance, slight fluctuations in the degree of albuminuria an index of the progress or the regress of the disease) must be our guides. And I think that the consensus of clinical experience speaks for more liberal feeding of kidney cases than is usually adopted, and decidedly against one sided alimentation. It speaks by all means against an exclusive milk diet.

Discussion.

Robert H. Babcock, Chicago: I regret very much that some points in this very capable paper could not have been elaborated more by the author; that is, dwelt on more in detail. I should like to refer for a moment to the ingestion of fluids in nephritis, especially chronic nephritis. The author touched upon this in his consideration of the injury to other organs. It is almost a universal rule for physicians to encourage their patients with chronic nephritis to ingest very large amounts of fluid; the more the better. It has been pointed out by many, and recently in an admirable article by Von Noorden on the diet in chronic nephritis, which appeared in the International Clinics of Philadelphia, that it is sometimes a mistake to encourage these patients to drink large amounts of fluid, but just as much a mistake, on the other hand, not to take enough fluid. Some patients pass more urine when they drink a moderate amount or even a comparatively small amount of water, and other patients pass more urine when they drink a large amount of water. Therefore, a universal rule cannot be laid down. The physician and the patient together should ascertain what amount of fluid intake will enable that patient to pass the largest amount of urine. When a patient takes in an amount of fluid that he cannot excrete, as Dr. Croftan stated, he overtaxes his cardio-vascular system and the integrity of the heart in its maintenance of the blood

pressure, which is an absolute *sine qua non* in prolonging the life of chronic nephritis patients.

It is just in this respect that an exclusive milk diet is harmful to many of these cases. They are not able to excrete all of the fluid they take in. This touches vitally on the matter of the regulation, by experience, of the amount of fluid appropriate in each case.

BREAST VERSUS BOTTLE IN INFANT FEEDING.

BY ALFRED C. COTTON, M. D., CHICAGO.

Statistics as to the relative morbidity or even mortality with reference to the methods of feeding are difficult to obtain. This is especially true in America where but little effort has been made to secure this information through the death certificates of infants. In some foreign countries and cities physicians certifying to the death of an infant, must state not only the cause of death but also the method of feeding. From such data only, can accurate information be obtained as to the relative mortality of bottle and breast fed infants. Attempts have been made from time to time in many population centers by means of circular letters and personal canvas of the local medical profession to secure expressions of opinions on this subject. The results of all these efforts show a startling but significant uniformity. It has been found that the infant at the breast possesses a remarkable immunity. 1st, from a majority of the acute infectious diseases; 2d, from the diarrheal disorders, and, 3d, from such nutritional diseases as rickets, scorbutus, marasmus, etc.

It is fair to state that in the exceptional cases where these disorders occur in the breast fed, the tendency to fatality is far less than from the same diseases in the artificially fed. These facts no one will gainsay although many theories obtain as to their explanation.

In summer diarrheas alone statistics show that 97% of the fatal cases were artificially fed, leaving only 3% of the mortality in infants exclusively at the breast. A startling exhibit for the dead, but when we consider the fact that among the survivors many show the effects of retarded development for years and sometimes throughout life in acquired

diathesis and lessened resistance to intercurrent diseases, we perceive that not only is the indirect mortality largely increased but that the physical and mental impairment must be added to the sum total. No one disputes that rickets, scurvy and marasmus are essentially disorders of artificial feeding, nor that intractable summer complaint must be considered synonymous with artificial feeding. The argument in favor of substitute feeding that judicious and scientific supervision would appreciably lessen the mortality of this class can be offset by the very apparent fact that the same intelligent care applied to breast feeding would practically eliminate fatality from this cause.

If better evidence of the inefficiency of any known method of artificial feeding than the high mortality is required, one has only to turn to the enthusiastic feeding faddists themselves. Unanimity of opinion among independent observers means something. To-day no one questions the efficiency of quinine in malaria or of mercury in syphilis. The fad for artificial feeding is fast becoming a mania under the leadership of some physicians who have done much to improve artificial feeding and who make extravagant claims for results thereof. Isn't it time to call a halt, not to dampen the ardor of those who are working along the lines of improved dietetics for infancy, but to arrest the tendency which seems to be growing to depend upon artificial as against *natural* food. There is a tendency to raise artificial feeding from its true position of a *dernier resort* to that of a *premiere resort*. But the admission even for argument's sake that cow's milk may be equal to breast milk cannot be tolerated in practice.

It is entirely beyond the province of this paper even to mention the many different kinds of infant foods—much less to discuss their relative merits. Look where we will, the evidences are abundant of continuous effort to solve the problem of a suitable substitute for breast milk, and the highest recommendation claimed for any substitute is that it most nearly resembles the maternal product. In cow's milk was found this apparent resemblance with but little variation

in the percentages of its gross constituents, namely: fats, lactose, proteids and salts. To perfect more nearly this resemblance a modification of these percentages was desirable. At first glance it would seem that this desideratum is secured in the milk laboratory. The persistent high mortality, however, under even the wisest modifications, has led to a more careful comparison between human milk and that of other mammals with results that afford some explanation for the failures in substitute feeding by cow's milk. The albuminoids of mother's milk differ essentially from those of cow's milk. By taking two watch crystals, filled with a weak solution of acetic acid, and letting fall into them from a height of two or three inches, a drop of mother's milk and a drop of cow's milk respectively, one of these differences becomes apparent, mother's milk coagulating in light loose flocculi, which disseminate throughout the fluid; that of the cow's showing dense and heavy curds which fall to the bottom. In other words, the proportion of proteid coagulable by acid (caseinogen) is much greater in cow's milk than in human milk. According to König, the proportion of lactalbumin to caseinogen is as 1:4 in cow's milk, while in human milk it is as 1:2. It seems hardly necessary to emphasize the fact that the finely subdivided precipitate favors the action of the digestive secretions, while the dense curds of cow's milk resist this action so long that fermentation often ensues, with all its train of intestinal disturbances. Wroblewski has demonstrated that human casein retains, during digestion, its nuclein in solution; it is fully digested, while in cow's casein the nuclein is not fully digested; a "paranuclein" is deposited undissolved and undigested.

From his studies of *nucleon* Siegfried found that cow's milk contains 0.05% and woman's milk 0.123 per cent nucleon. In cow's milk the phosphorus of the nuclein amounts to six per cent of the total amount of phosphorus contained in the milk: in woman's milk 41.5 per cent. Practically all the phosphorus in human milk is in organic combination (nuclein and caseinogen). Concerning this point Salkowski says: "These

conditions are evidently of the greatest moment in the nutrition of the nursling. As the development of the bones is more rapidly accomplished in the nurslings fed on woman's milk than in those fed on cow's milk, the probable conclusion is this: that nucleon has an important part in the absorption and assimilation of phosphorus. The same should be said of calcium, which also combines with nucleon. Although woman's milk contains less calcium than cow's milk, more calcium is utilized and the nucleon is evidently an important factor in the absorption."

From the above, some explanation may be drawn: First, as to why some infants can not be induced to tolerate cow's milk in any of its possible modifications; second, why normal nutrition cannot be maintained even though digestive toleration be established. The assertion made by many writers that strong children may tolerate cow proteids even though not largely reduced, does not help us out, for the reason that it is for the weakly infant with the feeble digestion that the skill of the physician is sought.

It is argued (since the caseinogen, so largely in excess in cow's proteid, has proven that most intractable constituent to infant digestion) that splitting the proteids by the precipitation of this ingredient with rennin, retaining only the more soluble lactalbumin and globulin, would overcome this obstacle. The result is seen in the revived popularity of the old time whey and cream mixtures with some apparent improvement in infant gastric toleration. As I believe no one will contend that the average cow's milk is better adapted to the requirements of infant digestion than is average human milk, so I believe that no one would claim that the mother's product would be improved by milking it in a can, running it through a strainer then through a separator and hauling it over miles of country road, of railroad, of city streets, to be sterilized or even warmed again in the nursery and fed through a rubber nipple. I believe that it is more than a mere theory that the fresh lacteal secretion possesses an element of vitality quite essential to its ready absorbabil-

ity in the infant's digestive tube that is lost in the process of chilling, separation, hygienic laboratory processes. It is more than a mere theory that the elaboration of the lacteal product of different mammals is accompanied by the production of certain characteristic enzymes which facilitate its digestion and absorption and afford a possible explanation of the immunity of the breast fed to many infections. Aside from bacterial contamination is there not a difference between live and dead milk?

If the idealist, then, in artificial feeding with his herd of selected cows, (under the care of a competent veterinarian) carefully housed and dieted and groomed and milked according to accepted hygienic principles, the product handled according to sanitary requirements, modified in the laboratory by chemists most scientifically, if he fail to secure, with the select few, results which compare favorably with mother natures simple processes, what shall we say of the thousands in the disfavored masses who must depend for artificial feeding upon the ordinary unprotected milk supply?

There is no doubt that with improvement in the general milk supply by careful hygienic supervision, many of the evils of milk feeding will be diminished, but the most sanguine advocates of modified cow's milk have never claimed for a moment that they ever hope to rival breast milk as a food for infants. Is it not time to inquire why more of this energy is not directed along the line of natural feeding? Disturbances of lactation, their causes, correction and prevention are problems which have received but little attention when compared with the zeal displayed in the search of some new method of artificial feeding. The study of the physiology and hygiene of lactation is the subject for the future children's physician. In this work the frequent analytical examination of breast milk must be an important factor. I believe that any agency that has a tendency to minimize the importance of breast feeding should be watched and guarded jealously by all wide awake humanitarians.

On this account the milk laboratory is to some extent a delusion and a snare. Its

malign influence is farther reaching than any other method of artificial feeding for the very reason that it comes nearer meeting the scientific requirements. The fact that it receives the endorsement of some of the best students of infant dietetics renders it all the more dangerous because of the lessened reluctance of mothers and physicians to resign their helpless charges to the dangers of artificial feeding.

The great value of the laboratory in emergencies cannot be questioned. In fact, it marks the extreme degree of progress in infant artificial alimentation, but the establishment of a belief in the minds of the laity, or of the profession, that laboratory feeding is worthy of comparison with the natural method is too far reaching in its baleful consequences.

While agreeing with Louis Starr that a large majority of American mothers naturally desire to nurse their infants, I am satisfied that the demands of social life and the apparent exigencies in her struggle for subsistence too frequently convince the mother that it is her duty to put the infant away from the breast at an early period. In this struggle between maternal inclination and apparent duty, the suggestion that any particular method of substitute feeding receives the sanction of the highest authorities comes to our mother Eve as the whisper of the serpent in the garden.

Then, in view of our knowledge of the mortality and morbidity of the artificially fed I ask what right we have to expose any infant to these dangers? What would be thought of the surgeon who deliberately adopts a method of operation as a mere matter of convenience or expense with the knowledge that the patient's life is jeopardized thereby many fold? Does not the same responsibility rest upon the doctor who counsels or even allows the removal of an infant from the breast with the knowledge that he is consigning him to a class in which the mortality is 8 to 10 fold that of the breast fed? Many of the obstacles to natural feeding are insuperable or even formidable only as long as the lay mind is ignorant of the rarity of this necessity. When this re-

sponsibility is brought home to the physician the difficulties of breast feeding will become proportionately insignificant.

In England there is at present agitation for legislation to prevent the employment of mothers whose infants are under one year. The function of nursing is so important, not only to the life and future well being of the infant but also to the interest of the state, that too much can not be done to encourage and dignify the custom.

From the dawn of art to the last half century the nursing mother has been deified, witness the portraits of Madonnas which crowd the world's art galleries. If the halo *must* be torn from the brow of the twentieth century mother, let us see that it finds its next best place upon the head of the carefully selected wet-nurse rather than upon that of the cow, goat, ass or mare.

Hygiene and sanitation present today no subject of equal importance to that of breast feeding of infants. The question of the hour is how may the vast amount of priceless pabulum now running to waste from abandoned mammary glands be utilized. The material is abundant but scattered. The crying need is everywhere in evidence. There is urgent demand for an organized registration bureau for wet nurses—an organization that shall guarantee a complete medical supervision and inspection of all wet nurses offered to the public, one that will appeal to the confidence of the profession, whose busy members driven to their wits ends by exasperating failures to secure substitute breasts fall too readily into the slough of artificial feeding.

Discussion.

I. A. Abt, Chicago: I was very much gratified to hear this excellent paper, and I am sure that no more important a theme could be discussed from the standpoint of infant feeding than the point that the mother's milk is the best food for the infant. There is no doubt but that with our modern civilization mothers cannot nurse their babies. In a large number of cases, perhaps only three in ten or four in ten, mothers can nurse their babies during the normal period of lactation. There seems to be something in the social environment that actually prevents women from nursing their babies. It is the experience of all of us that perhaps in the fourth or fifth, sometimes as late as the tenth week, the mother's milk gradually dries up. She means well, she wants to nurse her baby, but

she cannot do it. When that occurs the problem confronts us, how shall the baby be fed. That hardly came under the scope of Dr. Cotton's paper, but, I think, we ought to come out now and make some positive declarations as to what can be done for infants who are unfortunate enough to be deprived of their natural food. When we review the immense literature on infants feeding, everything that has been done and suggested during the last ten or fifteen years, we are appalled. Huebner, of Berlin, feeds his babies on the plan of giving so many calories of food in order to maintain life and equilibrium by weight. Others give Gaertner's milk. And when we come to the literature of our own country we find that there is more intelligent feeding done here in America than elsewhere, because Americans are trying to get a food that is adapted to the child's ability to digest.

I have had some experience with artificial feeding by means of substitute or modified milk products and I have come to the conclusion that if the physician will study out a plan of feeding for each case, if he will individualize, he can, in a large number of cases, successfully feed his baby. As time goes on and as we become more familiar with the methods and as we learn more about the management of cases and classify them, we will, I am sure, meet with greater successes than we did formerly. I did not quite understand formerly that I could give the child low percentages of proteids and albumens and still maintain life. I find now that I can modify the foods, give lower percentages and thus make more suitable combinations. And I can make them right at the home, doing without the laboratory, by following out the various plans devised by distinguished Americans who have worked out this very important problem.

Wm. H. Butler, Chicago: I think Dr. Abt has touched upon one of the points that characterizes the pediatrician from the general practitioner, and that is the question of substitute feeding. But we must acknowledge that substitute feeding is not based on any scientific method. He depends too much upon the puttering of the man who intends to do the feeding. Depending on a low percentage of proteids, as Dr. Abt says, it is a case of puttering with the child until you strike a food medium that will agree with the child. The whole principle of feeding is not placed on a scientific basis, because apparently it has not yet been started in the right direction. The substitute feeding methods have been reasoned out backwards, as it were, from the diet standpoint rather than from the standpoint of the toleration of the infant. As, for instance, Rotch's present method of laboratory feeding based on the percentage plan. It is not reasoned out from the standpoint of the toleration of the infant, but from the food basis; that is to use only those food constituents which we have learned from experience, and not from scientific reasoning, will be tolerated by the infant.

Dr. Cotton has laid emphasis on a point that should be impressed on the profession at all times when opportunity offers, and that is that there is no method of feeding so ideal

as the breast feeding, and that alone does not meet all the requirements.

As to the percentage of infants that are fed by mother's—I believe Dr. Abt is a little low on that. So frequently it is the fault of the advice given the mother. The mother is frequently discouraged, because of the neuros-thenic tendencies of many mothers, believing that the nursing infant is a drain on her; or because they are prohibited in a way from engaging in the same social life as they did before because they are kept down by the infant. This is frequently the reason, in the city at least, why there is a lessened tendency for mothers to nurse their infant. Yet we must remember that there is no feeding so ideal as the breast feeding and we should always do all we can to encourage it when it is possible.

Dr. Cotton (closing the discussion): It was not my intention to precipitate a discussion regarding infant feeding. It is well known that hardly a subject may be mentioned in any assemblage of practitioners, except, perhaps, along the line of the surgical specialties, that will precipitate a more prolonged discussion than infant feeding. Bodies fail to adjourn for dinner; set aside their business as long as anybody can get the floor to say something more about how to feed infants. All of which proves the absence of harmony and unanimity in the methods of infant feeding, and perhaps gives us the reasons for the failure of all known methods of artificial feeding, and it is another plea for the natural feeding of infants.

I appreciate all that Dr. Abt and Dr. Butler said, because we have all had the same experience, the difficulty of getting milk from a dry breast. I think it is Emmett Holt who says that he believes that only eight percent of women can nurse their babes; a most unfortunate class of patients.

It was many years ago that surgeons used to discuss healing by first intention and second intention, and laudable pus, and a whole lot of things relegated now to the rubbish heap. As soon as it dawned upon them what must be done, antiseptic or aseptic surgery sprang out and everybody went to work on a new basis and along new lines. That constitutes the difference between the surgeon and the physician. I am sorry to say that we are puttering around without being able to see the truth. I believe it is a matter of education.

Milk analysis—How many practitioners who treat the disorders of infants make it a practice to analyze the mother's milk. Some of my most respected colleagues in pediatric lines have said to me, "What is the use of doing this milk analysis?" I have tried it and do not see that it does any good. Thirty years ago the average practitioner would say, "What is the use of this routine uranalysis." You older men know that after all you have examined the urine of your patients for thirty years as a routine practice; and finally when you were stimulated to examine the secretions you did it as a routine practice without hardly knowing why you did it. You must admit the truth of that. By persistency in examining this one excretion light gradually dawned; facts were added. How

many now make a systematic examination of the blood secretions and excretions. A systematic routine practice adds facts and data that will shed light upon these obscure points.

I believe that everyone who has to do with the feeding of infants should insist that he must know the reason why the mother cannot feed her infant; put it to her that it is her duty to do it. Tell her the facts and show statistics, and if she has not the milk, try to find out why.

What is the hygiene of lactation? That is too large a subject to go into at this time. Until we make a positive stand we will still continue to find in books the articles on infant feeding. It is the natural feeding that we want, not the artificial and the physician is the man to bring about the desired state of affairs.

HEREDITARY TENDENCY TO REFRACTIVE ERRORS IN A FAMILY.*

BY MORTIMER FRANK, B. SC. (M. I. T.) M. D.,
CHICAGO.

Errors of refraction as a rule are not largely influenced by heredity. In the greater number of cases, where the transmission of faults in the refractive apparatus of the eye recur in the offspring, myopia is more often transmitted. Owing to several interesting hereditary features, the following history seems worthy of record.

The father was myopic but never wore glasses. His mother and three sisters were likewise near-sighted, but all wore a constant correction. The mother of the family has worn a convex lens for distance for the past eight years, and recently, when re-examined for her presbyopic correction, was given a +4.50 sphere in each eye for constant use.

Of five children the eldest child, a daughter, has worn concave glasses, O. D.—2.50 \odot —1.75 \times 180 O. S. —5.50 \times 160 for fifteen years.

The second child, a daughter, was lately refracted and wears continuously O. D. —8.50 \odot —1.50 \times 180. O. S. —9.50 sphere. For the past twenty-one years she has worn her myopic correction.

The third child, a son, was examined for the first time a year ago and uses O. D. —5.00 sphere. O. S. +1.00 sphere, as his correcting glass.

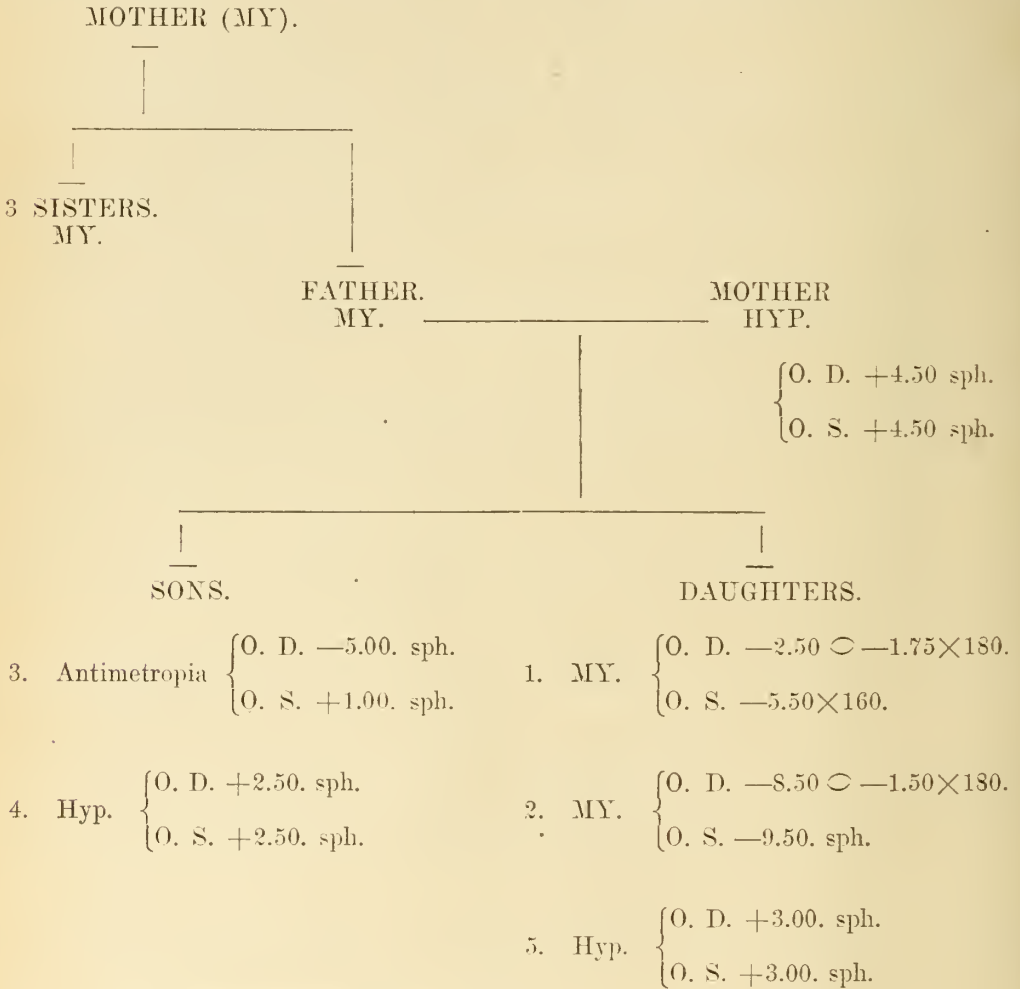
The fourth child, a son, was refracted three

*Read at 53d Annual Meeting, Chicago, May 30, 1903

years ago and was given a +2.50 sphere in each eye.

The youngest child, a daughter, has never worn glasses, but to complete the history, an examination was made and three dioptries of hyperopia found.

In the cases just cited, the two myopic children are of the same neurotic temperament as the myopic parent, the father, while the two hyperopic children are disposed to be like the mother. The antimetropic child has characteristics of both parents.



TREATMENT OF TYPHOID FEVER.

BY WILLIAM F. WAUGH, M. D.,
Professor of Practice, etc., Illinois Medical College.

The motto of modern surgery is early and decisive intervention. The lesson of Antitoxin is the same. The watchword of those who practice and believe in modern therapeutics is the same. We cannot afford to wait until the slow methods of the bacteriol-

ogists have established a diagnosis that, like an autopsy, comes too late to benefit the patient. Typhoid fever must be diagnosed so far as to permit its effective treatment in the incipiency of the attack; and the physician who cannot do this must learn how to do it. Very often the diagnosis is so far exclusive that we are able to say that if not typhoid we are unable to form a distinct conception of the case. And as the treatment of this fever does no harm in other maladies, is in

fact mainly indicated in any case presenting the initial symptoms of typhoid, no possible harm can accrue from it.

Take a case that has been exposed to typhoid, a young adult coming from the country to the city, with lassitude, epistaxis, broken sleep, incoherent dreams gradually becoming conscious, aching of the bones on which the body rests, weakness and sweating after meals, intestinal disturbance aggravated by laxatives, tympanites, tongue tending to show a red tip and edges and a dry or dark stripe down the center, and we need not wait for the rose spots or the Widal reaction. Long before this train of symptoms is arrayed the experienced physician will have his patient on appropriate treatment.

Begin with calomel. Wunderlich showed that whatever the treatment it was more effective if a preliminary dose or two of calomel, gr. v—x, was administered. We do better now, for we follow with saline laxatives till the alimentary canal is empty, possibly aiding with repeated enemas of some mild antiseptic, such as the sulphocarbolate of zinc ten grains to the pint. There is always advantage in clearing the bowels of all possible accumulations.

In the vast majority of instances the bacteria causing the attack enter through the alimentary canal; there they must multiply and establish colonies before they can muster sufficient strength to produce the typical symptoms. There their most prominent lesions are found, so much that the malady has been denominated enteric fever. And in the alimentary canal during an attack we find the conditions of abundant heat and moisture, decomposable material in abundance, myriads of microorganisms of many varieties and a marked deficiency in the quantity of the alimentary fluids like the bile, that are believed to in some measure disinfect the bowel, or at least keep its contents toxicity down. No one who has noted the odor of an alcoholic stool can doubt that the bile is at least a deodorant; and that this action is beneficial.

These considerations point *a priori* to the probability that the antiseptics will be use-

ful in typhoid fever. And in this class may be arrayed about all the agents that have won repute in treating this malady. Beginning with Wood's spirits of turpentine, still unequalled for the emergency for which he advised it, the hydrochloric acid, iodine, carbolic acid, sodium benzoate, and the whole list of more recent antiseptics, all the agents that have been vaunted as remedies for this malady have been of the antiseptic group.

None of these has given the writer as good results as the sulphocarbolate of zinc. I have now employed this remedy as a specific in typhoid fever for nearly a quarter of a century, so that my views are assuredly not hastily jumped at. As soon as the bowels have been cleared of their contents begin giving the sulphocarbolate, gr. j. to v. every hour, till the stools are deodorized. Some take this with no difficulty; with others some gastric irritation ensues. The addition of bismuth subcarbonate or subnitrate, and of saccharated pepsin, or peptenzyme, two to five grains to each dose, renders the sulphocarbolate non-irritant. This may be given in powder or capsule. After the stools have become inodorous the doses should be diminished to a quantity just sufficient to keep down the odor. About forty grains of the zinc a day are usually required at first, and half this dose subsequently. Some cases require more, but usually this is because the bowels were not first emptied. Many physicians have a superstitious dread of moving the bowels in typhoids. It seems evident that the decomposing matters there are not conducive to the well-being of the affected tissues, especially when ulceration has opened up a way to the deeper layers of the intestine. That surgical cleanliness cannot be secured in the bowel we well know; but that is no reason for neglecting to make the canal as clean as we can. After all, it is not possible to make the skin actually bacteria-free, but he would be a bold man who would therefore do away with all attempts at asep-sis.

The results following the deodorization of the stools in this manner are among the most striking obtained in the practice of medicine. The fever falls a degree or more; the head-

ache and backache subside; the diarrhea, tympanites and abdominal pain cease; the hebétude and nocturnal delirium vanish; the tongue grows moist and loses its distinctive typhoid appearance; in a word, about a third or more of the symptoms totally disappears when this has been done, and the case is reduced to the category of mild or even abortive forms, and is easily managed. The proportion of abortive cases is increased in direct proportion to the early and efficient application of this treatment.

As in other fevers the temperature may be moderated by the use of aconitine, or even veratrine if the secretions are not free; the heart may require digitalin or the arsenite of strychnine; restlessness usually indicates imperfect antiseptis, or may require the addition of a little zinc valerianate, a grain or two a day. The occurrence of pneumonia calls for strychnine arsenate in full doses, with turpentine externally and frequent change of posture.

The sulphocarbolate is emphatically not a remedy for ulceration or hemorrhage in the latter stages. Its early and well-directed administration prevents such occurrences, but when they have occurred there are other better remedies. The writer clings to the spirits of turpentine, as the best means of stimulating the vitality of the weakened tissues on the point of falling into sphacelus. Give in doses of five to twenty drops every hour, in emulsion or capsule. The salts of silver also give good results here.

If hemorrhage occurs draw the blood away from the open vessels by flushing the skin with atropine, and give ergotin, or hydrastine, or stypticine, with silver nitrate or full doses of turpentine, till the hemorrhage is controlled and the bleeding vessels healed. I will frankly admit that my experience with these emergencies is very limited and ancient, as since adopting the sulphocarbolate treatment I have scarcely seen a case except in consultation.

As to the diet of typhoid there is much to say. The almost universal practice is to feed on milk. Even if this is secured and kept in

a perfect condition it is objectionable, from its liability to form hard curds in the bowels, and to sour. It is better to feed the patient on meat broths, the raw white of egg in cold water, raw fresh fruit juices, and one of the prepared meat aluminums, with coffee—and plenty of water. This is necessary to keep the system flushed and the debris washed out. Give the food at four-hour intervals with a fluid half way between, like coffee or fruit juice, and prescribe the number of ounces to be taken at each feeding. Whether the patient takes one or sixteen ounces makes a difference; though the nurse may simply record that the patient "took milk."

During convalescence there is a special call for remedies that increase the toxicity of the tissues, and restore the blood to its normal condition. Nuclein solution is by many given throughout the whole course of the attack, to reinforce the leucocytes; and I am not prepared to combat this idea. It has seemed in the cases in which I have given this remedy that the other treatment had a better effect, and that the debility and emaciation were less. Berberine answers a good purpose during convalescence, with the phosphate of iron. Both should be administered in small and frequent doses to get the maximum effect without irritating the delicate stomach. Throughout this period the bowels must be kept clear and clean, and the diet carefully guarded as long as soft stools continue. Autotoxemia is very easily induced at this time and the effects are more disastrous than when the patient is in ordinary health as at the beginning of the attack.

Finally let me call attention to the extreme importance of putting the sick room, house and surroundings in perfect hygienic condition and keeping them so during the course of the attack. This removes the principal cause of malignancy. The stools should be passed into a vessel containing *fresh* whitewash and allowed to stand in it for at least an hour to allow perfect destruction of the *materies morbi*. Were this done in every case of typhoid fever that malady would in a few years be a thing of the past.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

Official Reporters of Affiliated Societies—

COUNTY SOCIETIES.

Adams County—J. A. Koch, M. D., Quincy.
Alexander County—J. T. Walsh, M. D., Cairo.
Bureau County—O. J. Flint, M. D., Princeton.
Bond County—W. T. Easley, Greenville.
Calhoun County—T. O. Hardesty, M. D., Kampsville.
Carroll County—H. S. Metcalf, M. D., Mt. Carroll.
Cass County—J. A. McGee, M. D., Virginia.
Champaign County—Jas. S. Mason, M. D., Rantoul.
Christian County—W. T. Bridges, M. D., Stonington.
Clark County—L. J. Weir, M. D., Marshall.
Clay County—Warren Eugene Burgett, M. D., Louisville.
Crawford County—E. M. Cooley, M. D., Oblong.
Cumberland County—Dr. Rhoads, Toledo.
Douglas County—W. E. Rice, M. D., Tuscola.
De Witt County—J. H. Tyler, M. D., Clinton.
Edgar County—H. McKennan, M. D., Paris.
Edwards County—J. H. Lacey, M. D., Albion.
Fayette County—Asa L. T. Williams, M. D., Vandalia.
Franklin County—W. H. Smith, M. D., Benton.
Fulton County—D. S. Ray, M. D., Cuba.
Gallatin County—M. D., Shawneetown.
Green County—H. A. Chapin, M. D., Whitehall.
Grundy County—H. M. Ferguson, M. D., Morris.
Hamilton County—C. M. Lyons, M. D., McLeansboro.
Hancock County—R. L. Casburn, M. D., Carthage.
Henderson County—W. D. Henderson, M. D., Biggsville.
Henry County—W. H. Watrous, M. D., Galva.
Jackson County—Wm. C. Hill, M. D., Murphysboro.
Jasper County—E. E. Burton, M. D., Newton.
Jersey County—A. K. VanHorne, M. D., Jerseyville.
Jo Daviess County—D. G. Smith, M. D., Elizabeth.
Johnson County—J. E. McCall, M. D., Vienna.
Kankakee County—J. A. Brown, M. D., Kankakee.
Kendall County—R. A. McClelland, M. D., Yorkville.
La Salle County—W. A. Pike, M. D., Ottawa.
Lake County—A. C. Haven, M. D., Lake Forest.
Lee County—E. S. Murphy, M. D., Dixon.
Livingston County—Jno. Ross, M. D., Pontiac.
McDonough County—J. B. Holmes, M. D., Macomb.
McLean County—A. F. Kaeser, M. D., Bloomington.
Macon County—Decatur Medical, Lynn M. Barnes, M. D., Decatur.
Macoupin Co.—J. Palmer Matthews, M. D., Carlinville.
Madison County—Alton Medical, Geo. E. Wilkinson, M. D., Alton.
Marion County—E. E. Fyke, M. D., Centralia.
Marshall County—W. G. DuFour, M. D., Speer.
Massac County—C. E. Trovillion, M. D., Metropolis.
Mercer County—A. N. Mackeray, M. D., Aledo.
Montgomery County—G. A. Cioffelter, M. D., Hillsboro.
Morgan County—C. E. Burkholder, M. D., Jacksonville.
Jacksonville Physician's Club, D. W. Reid, M. D.
Knox County—G. S. Brown, M. D., Galesburg.
Ogle County—H. A. Mix, M. D., Oregon.
Peoria County—Peoria City, C. U. Collins, M. D., Peoria.
Perry County—J. W. Smith, M. D., Pinckneyville.
Pike County—R. H. Main, M. D., Barry.

Pope County—W. S. Dixon, M. D., Rosebud.
Pulaski County—A. W. Tarr, M. D., Grand Chain.
Randolph County—H. C. Adderly, M. D., Chester.
Richland County—M. E. Poland, M. D., Olney.
Rock Island County—G. L. Eyster, M. D., Rock Island.
Saline County—J. R. Baker, M. D., Harrisburg.
Sangamon County—P. L. Taylor, M. D., Springfield.
Schuyler County—J. W. Ball, M. D., Rushville.
Cass County—J. P. Campbell, M. D., Winchester.
Shelby County—A. G. Mizell, M. D., Shelbyville.
Stark County—M. T. Ward, M. D., Toulon.
Stephenson County—R. J. Burns, M. D., Freeport.
St. Clair County—B. Portuondo, M. D., Belleville.
East St. Louis Medical Society—C. W. Lillie, M. D.
Tazewell County—C. G. Muehlman, M. D., Pekin.
Union County—T. Lee Agnew, M. D., Anna.
Vermillion County—E. E. Clark, M. D., Danville.
Wabash County—J. B. Maxwell, M. D., Mt. Carmel.
Warren County—W. H. Wells, M. D., Monmouth.
Washington County—J. J. Trout, M. D., Nashville.
Whiteside County—P. F. Purdue, M. D., Lyndon.
White County—W. A. Steele, M. D., Carmi.
Will County—Harry A. Patterson, M. D., Joliet.
Williamson County—G. W. Evans, M. D., Marion.
Winnebago County—Chas. W. Winn, M. D., Rockford.

DISTRICT SOCIETIES.

Aesculapian—H. McKennan, M. D., Paris.
Brainerd District—H. S. Oyler, M. D., Lincoln.
Central Illinois—F. J. Eberspacher, M. D., Pana.
Galva District—C. W. Hall, M. D., Kewanee.
Fox River Valley (Kane County)—F. H. Jenks, M. D., Aurora.
Military Tract—C. B. Horrell, M. D., Galesburg.
North Central—Geo. A. Dicus, M. D., Streator.
Southern Illinois—E. E. Fyke, M. D., Centralia.
Tri-County—Leroy Jones, M. D., Hoopeston.
Western Illinois—H. A. Chapin, M. D., Whitehall.

COOK COUNTY SOCIETIES.

Chicago Medical Society—F. X. Walls, M. D.
Aux Plaines Medical—W. R. Livingston, M. D., Maywood.
Evanston—M. G. McEwen, M. D.
Gynaecological—R. W. Holmes, M. D.
Laryngological and Climatological—J. E. Rhodes, M. D.
Lawndale—F. C. Honnold, M. D.
Neurological—C. H. Lodor, M. D.
North Shore—Geo. E. Baxter, M. D.
North Side—Mortimer Frank, M. D.
Northwest—Louis J. Pritzker, M. D.
Orthopedic—Edwin W. Ryerson, M. D.
Pathological—Geo. H. Weaver, M. D.
Pediatric—Emma M. Moore, M. D.
Physician's Club—Henry F. Lewis, M. D.
Southwestern—Thos. J. McGonagle, M. D.
Southern—W. S. Harpole, M. D.
Stock Yards—R. J. Tivnen, M. D.
Surgical—A. E. Halstead, M. D.

All communications should be addressed to the Editor, 522 Capitol Ave., Springfield, Illinois.
The JOURNAL is published monthly. The subscription price is \$3.00 per annum in advance.

NOVEMBER, 1903.

MR. EDISON'S WISDOM.

The lay press is showing a lively interest at present in the possible injuries that may result from the use of the x-rays. The published descriptions of Mr. Edison's injuries have had enough of the indefinite and mysterious in them to thoroughly alarm many individuals who have been treated success-

fully with the Röntgen rays but who now are tormenting themselves and their physicians with endless questions regarding the dire results that may follow in later years. Mr. Edison's statements have naturally received widespread attention and have been accepted without reserve, by the average individual who does not consider the first fact

that though Mr. Edison is an authority on the physics of the x-rays, he is not prepared to pass judgment on physiological or pathological processes in the human body.

The probability that any individual, physician or layman, will correctly interpret the significance of his own subjective sensations is not large, and Mr. Edison's theories and conclusions regarding the influence of the x-rays on tissues will not readily be accepted by those who have followed the work of earlier investigators in this field. Supposing Mr. Edison's diagnosis of his own symptoms to be correct and that the latter be due solely to the influence of the x-rays, the fact remains that the manner in which he exposed himself to the rays five or six years ago would, in the light of our present knowledge, be considered extremely reckless to say the least, and results of such exposures should not be confused with those obtained from the diagnostic and therapeutic application of the rays as employed by skilled operators during the past three years or more. The danger of serious burns following too long or too frequent exposures to the x-rays has been recognized by intelligent workers in this field for seven or eight years. Other injurious effects, including atrophies, alopecia, pigmentation, and hyperkeratoses which sometimes terminate in cancer, have also been observed, though chiefly in workers in x-ray laboratories who had been more or less exposed to the rays daily for a considerable period of time. Since these possible effects of the rays have been recognized, much valuable time has been devoted by trained and experienced men to the development of a technique that would permit the use of the rays for legitimate purposes without danger to the patient. So successful have these efforts been, that in the hands of experts the x-rays are now used both for diagnostic and for therapeutic work with entire safety. It is

of course understood that the x-rays should be employed by men only who have prepared themselves properly for the work, and that this or any other equally powerful agent is capable, in the hands of the ignorant, the careless or the venturesome, of doing great damage. Now that the possibilities of the x-rays are better known, even the men in greatest danger of injuries, the laboratory workers and experimenters (like Mr. Edison) in the physics of the rays, should be able to carry on their work with safety to themselves.

F. H. M.

ARE ALL DISEASES CAUSED BY PATHOGENIC BACTERIA OR THEIR TOXIC PTOMAINES? MUST EVERY DISEASE HAVE BUT ONE SPECIFIC BACTERIUM OR ITS PTOMAINES, FOR ITS CAUSE, REGARDLESS OF OTHER CLINICAL DIAGNOSTIC SYMPTOMS?

The above questions are suggested by the persistent and almost universal efforts being made by medical investigators, to find some bacterium or micro-organism in connection with every disease as its specific exciting cause. And there is manifested an equally persistent disposition to recognize only one micro-organism as the exciting cause of any disease. Thus having found the *bacillus tuberculosis* of Koch in a large majority of cases of pulmonary tuberculosis; the pneumococcus in pneumonia; the typhoid bacillus in typhoid fever, and the Klebs-Loeffler bacillus in diphtheria, these several pathogenic germs have been proclaimed as the only efficient exciting causes of the several diseases just named. And yet it was soon found by the same class of investigators that cases of each of the diseases named were occasionally met with presenting every clinical feature and symptom of tuberculosis, pneumonia, diphtheria, etc., in which neither tubercle bacillus, pneumococcus, nor diphtheric bacilli could be found, though some other pathogenic germs might be present. This instead

of leading them to the plain logical conclusion that any one of these diseases may be caused by more than one pathogenic germ, they were led to deny the genuineness of the exceptional cases by calling them pseudo or false cases of diphtheria, etc. By doing so they fail to preserve a clear line of distinction between the etiology and pathology, and thereby make the plain clinical diagnostic symptoms of a given disease, subordinate to the presence or absence of a specific microbe or its ptomaine as its cause. Though we find in our patient's fauces tumefaction of the tonsils covered by a characteristic membranous exudation, some enlargement of the lymphatic glands of the neck, and a continuous fever, constituting a perfect clinical picture of diphtheria, if no Klebs-Loeffler bacillus can be found we are told that it is a case of pseudo or false diphtheria. On the other hand if we have a young patient with only a slight redness or congestion of the membrane covering the tonsils, but no membranous exudation and no fever, yet if the bacilli just named are present it is declared to be true diphtheria; and is registered in the list of cases and aids in increasing the ratio of recoveries. Some even go so far as to call the cause the disease, as when they say this patient has "the malaria," and that one has "septicaemia" or poison in the blood, without indicating which poison, or what pathological conditions exist.

That all diseases are morbid or unnatural conditions of the structure or function of some one or all of the structures and functions of the living body is very generally admitted. The coexistence of certain morbid conditions of a structure or organ constitutes an inflammation. The coexistence of morbid conditions of both structure and function throughout the whole body have been by common consent, called fevers or constitutional diseases.

It is quite as important that every well defined group of morbid or pathological conditions constituting a disease, whether local or general, should be carefully studied in all its stages, as it is to study their specific or exciting causes.

Indeed, both the disease and its causes should be studied with the greatest care, having special reference to the influence of the latter on the several stages of the former, and the channels through which they are either eliminated or neutralized. Such studies should not be limited to the specific or specially exciting causes, but should equally include those of a predisposing character. For there is much proof that in some of the most important and fatal diseases having pathogenic bacteria for their direct exciting causes the natural vital resistance of an individual in good mental and physical health, with healthy surroundings, will successfully resist the influence of a bacterial exciting cause. But let the same individual be subjected to continuous mental depression from grief or anxiety, or to daily confinement in uncleanly and ill-ventilated rooms and in a few months we find him yielding to the malign influence of some pathogenic germ. This is well illustrated by the history of pulmonary tuberculosis. So widely are the tubercle bacilli diffused in this country and Europe that it is safe to assume that not one per cent of the adult population have escaped contact with such bacilli, either in rooms containing them or with persons suffering from the disease. And yet more than half of the human family live and die without any sign of pulmonary tuberculosis. And of the large number who have taken it and died, seventy-five per cent had either been born with defective vital resistance, or had been persistently subjected to either such mental or physical depressing and degenerating influences as had predisposed, or pre-

pared them for easy victims of the ever present bacillus. Consequently while we study with due diligence all pathogenic bacteria, if we would succeed in their destruction we must give equally diligent attention to the vital resistance of the individual and the influences that impair it.—*To be Continued.*

N. S. Davis.

REMARKABLE OCCURRENCE AT DUNNING.

Pull has heretofore had such a stronghold on Cook County Institutions that no position of responsibility was to be obtained without it. The conditions at Dunning appear to have become so intolerable that a change was absolutely necessary. Chicago medical men of high standing appear to have had much to do with bringing this about. Drs. Billings and Patrick have given much valuable time to this work. Dr. Patrick in discussing the subject recently said:

"The administration of the Cook County institutions has improved in a most important particular. All the Dunning officials, with the exception of the superintendent, are under civil service, and as for the superintendent his position differs considerably from that of his predecessors for a medical man without pull, on the mere recommendation of medical men equally without pull, has been appointed to the most important administrative position in the service of the country."

LAWYERS EXAMINED AND AUTHORIZED TO PRACTICE IN ILLINOIS BY THE SUPREME COURT.

On Saturday, October 17, 1903, the Supreme Court of Illinois re-appointed William B. Wright of Effingham and N. W. Branson of Petersburg, as members of the board of law examiners for a period of three years. It does not appear that the Governor was consulted in this very important matter nor has any complaint been made by him or any one else of the usurpation of prerogatives of the executive by this procedure. If the representative body of lawyers appoint ex-

aminers who represent them in licensing attorneys it would seem that the representative body or bodies of physicians should have the same right with regard to the licensing of physicians. In New York and many other states medical men have the same relation to the commonwealth as the lawyers. It should be so in Illinois.

COUNTY SOCIETIES ATTENTION.

At the last meeting of the Judicial Council the editor was authorized to furnish the officers of all county societies affiliated with the State Society with stationery bearing the seal of the State Society, etc., in two colors, and the names of officers of the Local Societies at wholesale cost price. Secretaries will please send in orders at once. The prices will be:

100 sheets \$1.25; 50 envelopes 75c.

200 sheets \$1.75; 100 envelopes \$1.00.

500 sheets \$2.25; 200 envelopes \$1.35.

MORTALITY STATISTICS OF ILLINOIS CITIES FOR SEPTEMBER, 1903.

	Popu- lation.	Death Rate.	Diph- theria.	Scarlet Fever.	Measles.	Small- pox.	Typhoid Fever.
Chicago	1,885,060	13.34	53	5	2	1	82
Springfield ..	40,000	9.00	1	1	0	0	1
Jacksonville.	16,000	10.60	1	0	0	0	3

The death rate of Springfield has been unusually low during the past three months.

Correspondence.

WANTS RECIPROCITY BETWEEN THE STATES.

WILL DR. JONES GIVE HIS AUTHORITY?

On account of health I have to spend the winters on the sea coast of Jackson County, Mississippi, where I am much solicited for prescriptions to ailing friends and their friends, doing so under constant apprehension of trouble. Finally I applied to the Board of Health for at least temporary

license, and was assured in answer that non-residents could not obtain license to practice medicine under any consideration. I am regularly licensed by the Illinois State Board of Health and graduated in medicine from the St. Louis Medical College, Class of 1861, and have my diploma. Now I see in your valuable Journal, page 144, Legal Status of the doctor, that in many other states, and Mississippi, the doctor may, though non-resident, have the privilege to practice within their borders, so they do not open an office. Now will you please oblige me by yes or no. *Is this reliable?* and can I *depend* on it? or are any previous formalities required?

Answer will greatly oblige,
Golconda, Ill., Oct. 19, 1903.

J. A. Koch, M. D.

WESTERN SKEPTICISM.

Editor Illinois Medical Journal.

Dear Sir: I have been receiving your valuable Journal for the past two years. A case which interests me very much is found on page 293 of your October issue, Dr. L. A. Ferry of Geneseo, has cured a case of *Eczema Papillomatosum* by using the static x-ray through a 13-inch soft tube. I have heard of the x-ray curing everything from pruritus ani to carcinoma of the pineal gland but up to date had never heard of a case of *Eczema Papillomatosum* being cured by its use.

The last case of eczema I cured died the next day after I cured him.

Had I used the x-ray he probably would have come to life again for the doctor says the hairs on the man's face *died* and later on they grew again.

I am just starting on my regular course of lectures on Dermatology and will be obliged to change my notes so as to take in this *Papillomatosum* variety of eczema.

True as the doctor says the field for the x-ray seems very large, in fact in Colorado we would call it *range* for there doesn't seem to be any inclination on the part of the x-ray fadists to put any fence around it. I would thank the doctor if he would give us a list of diseases *not* curable by the x-ray for at the present rate I believe they are going to "keep the plug and return the chew."

In Colorado we have survived Populism,

Eddyism and Osteopathy and with a little patience and epsom salts I believe we may outlive this latest fad. If all that is said and written about this fad were true, why not have an x-ray sanitarium for the poor and a radium sanitarium for the rich and as soon as the babies got rid of their coat of vernix caseosa give them an x-ray or a radium bath so that they would always be free from disease for surely an inch of prevention would be better than 13 inches of cure through a soft tube.

To a man up a tree it looks as though inside of a few years, all the armamentarium a physician will need will be an x-ray buggy case and an elongated gall bladder.

Anxiously yours,

J. M. Blaine.

Denver, Colo., Oct. 15, 1903.

ACTION OF THE MISSISSIPPI VALLEY ASSOCIATION ON DANGEROUS TOYS.

To the Editor:

At the 29th Annual Session of the Mississippi Valley Medical Association held at Memphis, October 7-9, the following resolutions were adopted:

In view of the fact that more than 400 deaths from Tetanus occurred following the 4th of July celebration of 1903, as shown by the statistical report elaborated by Dr. S. C. Stanton, of Chicago, and published in the Journal of the American Medical Association of August 29, 1903, the great majority of which might have been prevented had proper precautions been taken; therefore

Be it Resolved, That the conclusions which follow, as offered by Dr. Stanton in a paper presented before the Association, at the above meeting, be endorsed as the sense of the Association, and further

Be it Resolved, That the Secretary be instructed to forward a copy of these resolutions and conclusions to the Medical Press, Associated Press, and the Secretaries of the several State Medical Societies, with the request that they publish same and take suitable action thereon.

1. Enforcement of existing laws regarding the sale of Toy Pistols and other dangerous toys.

2. Enactment of laws by the nation,

states and municipalities prohibiting the manufacture and sale of Toy Pistols, Blank Cartridges, Dynamite Canes and Caps, Cannon Crackers, etc.

3. Open treatment of all wounds, however insignificant, in which from the nature or environment there is any risk of Tetanus.

4. Immediate use of Tetanus Antitoxin in all cases of Fourth-of-July wounds, or wounds received in barnyards, gardens, or other places where Tetanus infection is likely to occur.

5. As a forlorn hope, the injection of Tetanus Antitoxin after Tetanus symptoms have appeared.

Henry E. Tuley M. D., Secretary.
Louisville, Ky.

OBITUARY.

DR. L. M. SCHLESINGER.

Permit me to report the lamentable death of one of our colleagues:

Dr. M. L. Schlesinger died October 8, 1903. Born in Russia 37 years ago; graduated at the University of Moscow in 1889; served two years as interne in one of the Moscow hospitals; located in Chicago, Ill., in 1892, where he remained in practice up to his death. The doctor was a member of the Illinois State Medical Society, the Chicago Medical Society and the Northwest Branch—Chicago Medical Society.

Louis J. Pritzker,
Official Reporter.

Local Societies.

Fayette County Medical Society. In last months Journal in reporting the result of the trial of the case of Dr. L. L. Morey, who was sued for malpractice, the statement was made that Dr. C. A. Higinbotom had charged the plaintiff \$200 for removing some necrotic bone from the index and little fingers. That statement was based on the evidence of the plaintiff while on the witness stand and is a matter of court record. Dr. Higinbotom himself was not put on record on that point during the trial but informs me and has shown me his books to substantiate his statement that he charged \$111.50 for the operation and subsequent treatment and not \$200 as stated by the plaintiff.

Asa L. T. Williams,
Official Reporter.

The Pulaski County Medical Society held its regular quarterly meeting at Mound City on Tuesday, October 6th.

The secretary not being present the president appointed L. M. Winsted, secretary pro tem. The following members were present: J. F. Hargan, W. C. Rife, L. F. Robinson, L. M. Winsted, R. M. Fulkerson, J. B. Mathis, Sr. and C. B. Powell. The first paper read was **The Uterine Curette**, its use and abuse by W. C. Rife, which was ably discussed by all the members present, some valuable points being brought out. The next paper was **Acute and Chronic Diarrhea in Children** by J. B. Mathis, Sr., which was appreciated by the society and generally discussed by those present.

Our next regular meeting will be held in Mound City on Tuesday, January 5th, 1904.

A. W. Tarr,
Official Reporter.

The Sangamon County Medical Society held its regular monthly meeting, October 12, 1903, in the Supervisor's Room at the Court House, with A. L. Brittin, president, in the chair.

The minutes of the September meeting were read and approved. The application of C. P. Colby was read and he was elected to membership.

The applications of N. B. Gardner, of Loami, and J. V. White, of Auburn, were read and referred to the Board. Bills of Phillips Bros. and Secretary-Treasurer amounting to \$3.50 was allowed and ordered paid.

After some discussion, it was decided to have a banquet at our next meeting, it being the annual, and the President and Secretary were authorized to arrange for same, the price not to exceed \$1.00 per plate.

There was no literary program, but the evening was pleasantly spent by talks, and clinical cases of heart lesions, after which the society adjourned.

Percy Louis Taylor,
Official Reporter.

The Richland County Medical Society met at the City Hall in Olney at 8 p. m., September 29, 1903. The meeting was called to order by President Thompson. Minutes of previous meeting read and after correction were approved. A motion was made and carried for the president to appoint a committee to plan for and make all necessary arrangements for a banquet for the members of the society and their ladies. The banquet to be in October. Doctors Ziliak, J. C. Weber and Telford were named as the committee. The president named A. L. Ziliak as a member of the legislative committee from this county. G. T. Weber read an excellent paper on **Nephritis** which was discussed at length, nearly all present taking part in the discussion. The committee on program announced J. P. Soliss as the essayist for the next regular meeting in October and his subject to be **Rheumatism**. The society then adjourned subject to the call of the banquet committee.

A. T. Telford,
Official Reporter.

The Vermilion County Medical Society held its opening meeting and smoker, October 12, 1903.

Following our summer vacation of three

months the Vermilion County Medical Society was called to order by the President, H. F. Becker, at 8:30 p. m., in the City Hall.

The minutes of the July meeting were dispensed with.

W. K. Newcomb of Champaign was introduced and gave a comprehensive talk on the re-organization of the profession and the relations of the County to the State organization. The talk was thoroughly appreciated and was of undoubted benefit to our local society.

W. F. Burres of Urbana called our attention to the fact that Vermilion County is a part of the fifth district but for the present was going under the name of the Aesculapian District and suggested that it might be desirable for us to affiliate with the Aesculapian Society. A motion to this effect was carried unanimously. A motion was made to invite the Aesculapian Society to meet in Danville in May. Carried.

The following names were presented for membership: Effie Current, G. M. French, Geo. Williamson, of Danville; G. W. Hughes, of Armstrong; P. H. Fithian, of Fithian; O. W. Michael, of Muncie; A. C. Johnson, of Sidell.

E. E. Clark,

Official Reporter.

The East St. Louis Medical Society met in regular session on October 5th, 1903, with C. F. Whitmer, president, in the chair, and C. W. Lillie, secretary; and W. E. and W. S. Wiatt, Rendleman, Campbell and Collins, members, present, and Dr. Geo. A. Stewart, a guest.

The minutes of the last meeting were read and approved.

W. S. Wiatt reported a case of **appendicitis** in a man twenty-four years of age. The history showed this to be his first attack. He was first seen in the evening when he had a temperature of 100 F.; pulse 80; vomiting persistent; uncontrollable. He was sent to the hospital and operation done the next day. The appendix was found to be gangrenous and sloughing with no evidence of any protective adhesions. A few hours delay in operation would have been fatal.

Another case reported by Wiatt was in a child in which no history of a previous attack could be given. Child was first seen at five o'clock on Sunday. Temperature 100 F.; pulse rapid; did not complain of pain at this time; abdomen rigid. On being sent to the hospital the temperature rose to 104, and in a few hours to 105. Operation was done on Monday. The appendix was ruptured and embedded in a gangrenous mass of omentum. The gangrenous mass was free in the abdominal cavity, there being no effort to wall off the diseased part. No sutures were used, the wound being left open to heal by granulation which it did in two weeks. The temperature fell in eighteen hours from 105 to 99 F. Both these cases illustrate the necessity for early operation.

Campbell made a partial report on a case of **amebic dysentery** and presented a specimen of the ameba.

Other cases of minor interest were reported.

A paper on **Tuberculosis** by Cannady is the important feature for the next meeting.

C. W. Lillie,

Official Reporter.

The Aux Plaines Medical Society had a very pleasant meeting in the Phoenix Hospital, Maywood. The one important matter to come before us was the changing of the constitution to conform with that of the Chicago Medical Society. As you know we are simply one of the local divisions of the Chicago Medical Society.

All members of the Chicago Medical Society residing in the district bounded by West 40th street, on the east by North ave., on the north by 12th st., on the south and west to the county line, become ipso facto members of this society. Our old constitution, copy of which I send you enclosed, has been so modified as to conform to our new condition.

Our annual meeting with election of officers is now held on the fourth Friday of the month of September. The following officers were elected for the current year: Dr. W. S. Pickard, Maywood, president; Dr. Ellis Kirk Kerr, Oak Park, vice president; Dr. W. R. Livingston, Maywood, secretary and treasurer; Dr. W. F. Scott, Melrose Park, counsellor to the Chicago Medical Society.

The annual address of the president was read by Dr. Pickard, entitled **Relation of the Physicians to the Public School** showing the necessity for physicians beginning the prevention of grave future disorders of children during school age. Showing the necessity for individualizing pupils rather than the classing of masses of children into a fixed group without special attention to those at either extreme.

An address was given by Prof. Krauscup of the child study department of the Chicago Public Schools, showing the work and results of his department in physical and psychological research. These papers will no doubt appear in some journal in full.

I might add as a matter of medical news, that Dr. W. F. Scott of Melrose Park, returned from Europe October 5th.

W. R. Livingston,

Official Reporter.

The Fulton County Medical Society held its sixth annual meeting in the Churchill House parlors in Canton, and was called to order by Vice President Scholes.

The following members were present: Drs. Scholes, Chapin, Robb, Zeigler, Ragan, Oren, Miller, Hayes, Coleman, Shallenberger, Heise, Sutton, Nelson, Rogers and Ray.

Minutes of May, July and last annual meetings were read and approved. The following officers were elected: President, P. S. Scholes, Canton; First Vice President, J. Connelly, Farmington; Second Vice President, S. A. Oren, Lewistown; Secretary and Treasurer, D. S. Ray, Cuba; Necrologist, Dr. Miller, Canton; Membership Committee, W. T. Zeigler, Canton; Censor, W. E. Shallenberger, Canton; Delegate to State Meeting, P. S. Stoops, Ipava.

The following amendments were duly

adopted, proper notice having been given at the April meeting.

Article 4. "The annual dues shall be one dollar for associate members and one dollar and fifty cents for affiliating members."

Sec. 1., Art. 5. "Membership shall consist of affiliating members, those who desire to affiliate with the Illinois State Society, and associate members, those who do not desire to affiliate with the State Society."

Drs. Richards of St. David and S. L. Oren of Lewistown, were elected to membership.

Drs. Robb, Oren and Rogers were appointed to select next meeting place and reported in favor of Lewistown for the December meeting. Report adopted.

Secretary's report showing a balance of \$10.25 on hand was read and approved.

Dr. Regan presented a paper on **Infected Corneal Ulcer** and Dr. Robb presented one on **Gall Stones**.

The following dues were collected:

	County Dues.	State Dues.
E. W. Regan	\$1.00	\$1.50
H. H. Rogers	3.00	
W. E. Shallenberger	1.00	1.50
E. S. Nelson		1.50
W. T. Zeigler	1.00	1.50
Dr. Sutton	1.00	
L. R. Chapin	1.00	1.50
P. S. Scholes	1.00	1.50
S. L. Oren	1.00	
Helen Heise	1.00	1.50

D. S. Ray,

Official Reporter.

Jo Daviess County Medical Society. The regular quarterly meeting of the Jo Daviess County Medical Society assembled in the Masonic Hall, in Stockton, Ill., Thursday, September 24, 1903, at 1 p. m. The members present were Drs. Stafford, Godfrey, Gunn, Lewis, Miller, Egan, Hutton, Nadig, Smith, I. C. Eade, Kreider, Keller, Bucknam, Wright, Smith, with Drs. T. C. McGonagle, Carl Wagner and C. H. Searle, of Chicago and W. O. Ensign of Rutland, Ill., councillor of the Second District, also present.

Dr. Carl Wagner of Chicago, was then introduced who exhibited some very interesting and instructive specimens. The first was a patient who had been operated on for **Sarcoma of Thigh** four years ago, doing a hip joint operation and his method of performing the same. He also exhibited three specimens of his modified form of **Porro Operation**. This modification consisted of removing the uterus with everything in situ and the unique method of controlling hemorrhage; other specimens as **Tumor of Frontal Lobe of Brain**, **Double Uterus with Double Cervix and Partial Vaginal**, and several more very interesting specimens together with full symptoms and operative course.

Dr. W. O. Ensign, of Rutland, being present to pay his annual visit as counsellor spoke at length in the interest of the County, District and State Societies, praising our society for the good work that is being done in this northwestern corner of the State.

According to previous arrangements each doctor was accompanied by his wife or sweet-

heart, and at this hour (4 o'clock) they were invited to the dining rooms of the Great Western Hotel where a sumptuous dinner awaited them. Each did justice to his part and a number of toasts were listened to in which the president, Dr. G. E. Miller, acted as toastmaster. Dr. Godfrey responded to "Our Guests;" Dr. Egan to "Scientific Medicine;" Mrs. T. J. Stafford, "The Physician's Wife;" Dr. D. G. Smith, "The Country Doctor," and Mrs. S. G. Kreider sang several very beautiful solos. The visiting members being called on responded with suitable words, and all enjoyed the occasion to the utmost. During the scientific meeting the ladies were entertained by the ladies of the Stockton physicians.

At 7 p. m. the society again reconvened and Dr. Stafford presented a case of **Neuritis** in the hand, as the cause was unknown, a specific treatment together with a regular hygienic treatment was prescribed. Dr. D. G. Smith presented a well marked case of **Hodgkin's Disease** in a woman of 24. The only treatment advised was X-Rays.

The president then exhibited a typical case of **Phlebitis** in his right arm. The cause could not be accounted for and the treatment prescribed was bandaging on straight splint and elevation.

A vote of thanks was voted to Dr. Wagner for his presence and kindness in demonstrating these valuable topics. Also the thanks of the society to the Stockton members and their ladies for the royal treatment they gave the society on this occasion.

The society adjourned to meet in Elizabeth, January, 1904.

D. G. Smith,

Official Reporter.

The St. Clair County Medical Society held its regular quarterly meeting at Priester's Park on October 1, 1903, with President Lillie in the chair and following members present: Lillie, Hansing, Hilgard, Gunn, Campbell, W. E. Wiatt, Kerchner, Wangelin, Irwin, Kohl, Rendleman, Nifong, Zimmerman, W. S. Wiatt, Rembe, Starkel, Fulgham, Whitmer, Adams, Hagarty, Raab, H. Hertel, Wilhelmj, and as visitors Drs. Heely, Collins and Cannady.

The minutes of the preceding meeting were read and approved.

A roll call showed all the officers excepting Starkel and Rembe to be present. Both gentlemen came in afterwards.

Three excellent papers were the feature of the meeting; one on **How to Conduct a Labor Case**, by Dr. Nifong; another on **Fractures of the Lower Extremities**, by Dr. Campbell; and the third by Dr. Irwin, entitled **The Treatment of Typhoid Fever**.

In discussing Dr. Nifong's paper, Dr. Campbell stated that it was one of the most complete papers on the subject and that he agreed fully with the essayist.

Dr. Zimmerman reported a very interesting case where forceps had been applied with a distended bladder, resulting in two tears, each as long as the corresponding blade of the forceps. The tears extended into the bladder, but a large calculus present prevented the urine from

dribbling into the vagina and it passed through the urethra as if the bladder had been intact.

Dr. Wiatt said it was very important to know whether patient after labor was passing her water freely or not, and related a case where on the third day after labor he found an enormously distended bladder containing five pints of urine, in spite of the fact that the nurse had reported every day that the patient was passing water.

In discussing Dr. Campbell's paper, Dr. Portuondo said that the paper was so complete that no criticism could be offered and any comment was unnecessary, as it would only result in repeating the statements made by the essayist.

Dr. Starkel commended the paper very favorably, especially the stand taken by the essayist against the too early use of plaster of paris dressings.

Dr. Zimmerman asked how soon did Dr. Campbell allow his patients to walk on crutches. Dr. Campbell said that after the first week, and that his best case had walked from the first day.

In discussing Dr. Irwin's paper on *The Treatment of Typhoid Fever*, Dr. Nifong asked whether the essayist gives whiskey all the time. On being answered in the affirmative he objected to it on the plea that it would irritate the inflamed mucous membrane of the intestines.

Dr. Starkel stated that he used the cold bath and nothing else. He is opposed to the coal tar products, which he considers worse than the disease, and relates the very severe depression produced in a case where he had used a very small dose of phenacetin to reduce a temperature of 105° which the cold bath had failed to reduce. Does not believe in the use of carbolie acid. Has tried Salicylate of ammonium in one grain doses three times a day without any apparent effect.

Dr. Kerchner asked whether the essayist uses any of the beef extracts on the market and on being informed that preference was always given to the home-made beef tea, Dr. Kerchner stated that he was also in favor of that.

Dr. Hilgard stated that he had used acetone in two cases with very gratifying results.

Dr. Fulgham said that he gave a man in the fourth week of typhoid fever 2 or 3 grains of phenacetin with such results that for a time he thought he might lose the case.

Dr. Irwin in closing, said that in proper doses phenacetin was very useful in treating young children with typhoid fever.

Dr. Rendleman reported a very interesting case. Last July he was called to see a black woman, 30 years of age, who had been assaulted that morning at 7 o'clock. She lost consciousness for awhile, and on recovering walked for a distance and fell down, losing consciousness again. She bled very profusely. At 2 p. m., she regained consciousness. There were four scalp wounds, fracture of the skull and compound fracture of both bones of the forearm. There was amnesic aphasia. Patient was trephined, a clot removed from the brain and in three hours all symptoms of aphasia disappeared. The fracture of the forearm healed very well and movements of the forearm were very good and apparently everything was all right but on making an x-ray ex-

amination he found that the fragments were not in a straight line.

Dr. Whitmer reported a case of fracture where everything appeared to be in good condition, no displacement could be felt, but on making an x-ray examination the bones were found to overlap each other.

The applications of Drs. E. W. Cannady and C. Loeb were received and being favorably reported upon by the board of censors they were elected to membership by acclamation.

Bills amounting to \$19.93 were allowed.

On motion of Dr. Portuondo, Dr. Lillie was elected by acclamation to represent the St. Clair County Medical Society in the National Legislative Committee of the American Medical Association.

On motion of Dr. Gunn, the treasurer of this society was declared exempt from paying the annual dues.

Dr. Hilgard, seconded by Dr. Hansing, moved that Dr. D. C. Heely be elected an honorary member, and the motion was approved by a unanimous vote.

Treasurer reported cash on hand \$50.74.

A motion by Dr. Hansing, seconded by Portuondo, that the *Clinique* be continued the official organ of the Society and that every member be made a subscriber, the society to pay the cost, was approved.

The society then adjourned to meet again the first Thursday in January.

B. H. Portuondo,
Official Reporter.

The Southern Illinois Medical Association will hold a meeting at Marion, November 5 and 6. A. C. Bernays, of St. Louis, Mo., will give a clinical demonstration of the radical cure of hernia. The following program will be given:

Parenchymatous Nephritis, Pathology and Treatment, W. A. Sim, Golconda.

Summer Diarrhea of Children, Geo. T. Weber, Olney.

Malaria and Its Causes, L. F. Robinson, Ullin.

An Unique and Agonizing Gallstone, W. F. Grinstead, Cairo.

Errors of Refraction, A. C. Ragsdale, Metropolis.

Conservative Surgery by the Country Doctor, T. L. Granay, Irvington.

Report of Case, Prof. G. H. French, Carbon-dale.

Pernicious Malaria, Etiology, Diagnosis and Treatment, M. L. Winstead, Wetaug.

Pulmonary Tuberculosis, with Special Reference to its Etiology, C. W. Lillie, East St. Louis.

Report of Gunshot Wound of Face, E. W. Brooks, St. Elmo.

Cranial Injuries, with Report of Three Cases, G. A. Stewart, Metropolis.

Typhoid Fever, G. C. Crandall, St. Louis, Mo.

When Shall We Drain the Abdominal Cavity, W. S. Wiatt, East St. Louis.

Near-sight in School Children; Its Cause and Prevention, J. E. Jennings, St. Louis, Mo.

Clinical Microscopy, A. A. Bondurant, Cairo.

Non-penetrating Wounds of the Abdomen

with Report of Cases, J. L. Wiggins, East St. Louis.

Uterine Hemorrhage and Its Treatment, J. R. Coleman, Paducah, Ky.

Amputations, with Special Reference to Pressure-Bearing Stumps, M. L. Harris, Chicago.

Catarrhal Affections of the Upper Air Passages and How to Treat Them, G. C. Adams, East St. Louis.

Report of Two Unusual Cases, H. L. Gault, Sparta.

Organization and Ethics of Physicians, D. D. Hartwell, Marion.

History of Medicine, with Reference to Treatment Based Upon Rational Thought, not Empiricism, J. W. Armstrong, Centralia.

Some Difficulties in the Diagnosis of Intra-Abdominal Lesions with Report of Cases, Carl E. Black, Jacksonville.

An informal reception will be tendered the visiting physicians by the local profession on the night of November 5. Indications now point to a good attendance and interest.

Edgar E. Fyke,
Official Reporter.

The Mercer County Medical Society convened in the Masonic Hall, at New Windsor, Oct. 13, 1903, at 10:30 a. m., with President H. H. Fletcher in the chair; A. N. Mackey, secretary-treasurer and members Emmerson, Sherwood, Hay, Carter, Rathburn, McClanahan, Cox and Ryan present; also J. F. Percy, visitor from Galesburg, representing the State Society.

Dr. E. J. Hay, of Millersburg read the following interesting paper on *Trachoma*, which brought out many points of interest on the discussions that followed:

The name *Trachoma* originates from the Greek word *Tpaxos*, meaning rough.

Trachoma is an inflammation of the conjunctiva which arises from infection and produces an infectious purulent secretion.

It is distinguished from *Blennorrhoea* by the characteristic hypertrophy of the conjunctiva and its chronic course.

In fact it received its name from the roughness of the conjunctiva.

This hypertrophy of the conjunctiva occurs under two forms: the first consists in the development of papillae. These are small eminences newly formed on the surface of the conjunctiva which gives it a velvety appearance or, if the papillae are large the conjunctiva appears dotted with coarse granules or raspberry like projections. In this form there is no thickening of the conjunctiva as the meibomian glands are easily seen under the hypertrophied conjunctiva.

This papillary hypertrophy of the conjunctiva is only found in the tarsal conjunctiva and most clearly noticed on the upper lid which, on this account must be everted to make the diagnosis of this form of trachoma.

The velvety appearance in this form is due to the increase in size of the hypertrophied conjunctiva, it being thrown into folds between which corresponding deep clefts are formed, and on cross-section these folds appear as papillae. The connective tissue forming the papillae is

stuffed with round cells and the surface of the papillae is covered with greatly thickened epithelium which is continued into the depressions, and a cross-section gives it the appearance of a tubular gland. Such they were once considered. In some cases of this form of trachoma there are a few new gland formations.

The second form of trachoma is marked by the presence of trachoma granules.

They are gray or yellow, translucent, nearly round bodies which lie just beneath the superficial layers of the conjunctiva.

They are found most abundant in the folds of transition in which they are located in such numbers that when the lower lid is drawn down the fold projects as a thick, stiff swelling at the top of which the granules very often appear in rows. These granules can scarcely be seen in the conjunctiva tarsi because they are very small in this location and cannot push out the conjunctiva and are hidden by the papillae. Occasionally the granules can be seen in the semilunar fold as well as elsewhere on the conjunctiva.

In some cases of trachoma only one of these two forms of hypertrophy is noticeable, but generally both are and in the same eye.

The conjunctiva discharges a purulent secretion the quantity of which is greater in fresh cases and those associated with symptoms of irritation, as of a foreign body in the eye.

In older cases and those that run a very slow course the amount of the secretion is very scanty.

The course of trachoma. The hypertrophy of the conjunctiva gradually increases till it has reached its height (not the same in all cases) and then disappears again as gradually as it came leaving a cicatricial condition of the conjunctiva with contraction. In this manner is the specific morbid process brought to an end. In this way are the lasting contraction cicatrices formed.

The greater the degree of hypertrophy of the conjunctiva the greater is the contraction of the conjunctiva, and the longer the course of the disease. Sometimes running a course of several years duration. So also the more severe the disease the greater the severity of the contraction of the conjunctiva, and the worse the sequelae. The beginning of the formation of cicatrices is shown by a few narrow whitish fine bands, which can be seen in the reddened and thickened conjunctiva. These bands become more numerous and, forming a network till finally they may cover, or include, a considerable portion of conjunctiva giving it a pale, thin and smooth appearance. This process is first and best noticed in the tarsal conjunctiva.

If the hypertrophy is in spots, as it were, of the conjunctiva, there is where the cicatricial contraction will be seen.

In the conjunctiva of the fornix the same process takes place, only the external phenomena are different owing to the difference of conjunctiva. Here in place of the cicatricial contraction bands we see the swellings of the process of the disease become thinner and flatter, showing a bluish tint to the cicatrix. This process results in the condition known as *pannus*. It may be so extensive as to cover the

cornea or only partially so. If accompanied by irritation from outside sources will give rise to corneal ulcers and they in turn to Iritis.

In mild complications the pannus will often disappear of itself. In others leave an opacity of the cornea.

In the light cases and those that come under treatment early we have perfect cures. In all others we may expect to see some impairment of the eye. The impairment most frequently found is some distortion of the lids with faulty placing of the cilia. This distortion is produced by the cicatricial contraction of the conjunctiva and the tarsus, the tarsus bending in so as to be convex anteriorly. This band is usually found over the artery that supplies the circulation to the conjunctiva and running the greater part of the length of the lid and near its edge. By pulling the lower edge of the lid inward the cilia are also turned inward and against the cornea, producing a condition known as trichiasis. If this distortion of the lid is very marked we have the condition which is termed entropion. The turning of entire border of lid inward. The turning outward or ectropion, is also a result of trachoma. It is caused by great proliferation of conjunctiva, pushing it away from the eyeball, and contraction of muscular fibres of the orbicularis. This kind is only found in the lower lid.

The next most frequent impairment is what is termed symblepheron posterius. It is caused by a high degree of cicatricial contraction of the conjunctiva, causing the fold of the region of transition to flatten out completely, and the conjunctiva to pass directly from the lid to the eyeball. If the lower lid is pulled down with the finger, the conjunctiva stretches tightly in the form of a vertical fold between the lid and the eyeball. And if the lid is pulled down further the eyeball is pulled down with it. When the conjunctiva is very greatly contracted it loses its power of contributing through its own secretion to the moistening of the eyeball. In consequence, there is a feeling of dryness in the eye. The scanty muco-purulent secretion becomes thick and tough, afterwards, several dry places are noticed to which the lachrymal fluid does not adhere. This condition spreads till the conjunctiva is dry, hard and brittle. The lachrymal fluid becomes less and less and finally we have a cornea from previous pannus and ulcers becoming thicker, dryer and opaque; rendering the person affected badly blemished and blind forever. This condition is called xero-phthalia.

The next impairment is corneal opacities. These are after effects of both pannus and corneal ulcers. The greater the connective tissue growth of pannus the thicker and more dense the opacity. Corneal ulcers upon healing always leave an opacity. Etiology, trachoma originates only from infection from another eye affected with trachoma. The greater the secretion the greater the chances of infection. Infection takes place generally by means of the finger or some of the articles of the toilet, as cloths, sponges, towels, handkerchiefs and bedding which are brought into contact with the infected eye. Naturally the greater the number occupying the same apartment the greater the

liability of infection. It is most frequently seen among the poor and those living in low countries. It is especially prevalent among the Jews on account of their lack of cleanliness.

The symptoms of Trachoma are: Photophobia or sensitiveness to light, and sticking of lids together; also oedema of lids and conjunctiva, pain in the acute irritating cases and usual disturbance in the insidious ones. On examination we find the lid is partly closed due to photophobia and heavy lid, and upon everting the lids we may first notice the disease at the time when pannus is developing or even an ulcer forming. All acute irritating cases are very apt to come for treatment early.

Trachoma is a more or less self-limiting disease, but in self-limiting itself, it forms disastrous cicatrices. Generally speaking the more severe the case the longer it will last.

The treatment of trachoma. The indications for treatment are to relieve the hypertrophy and stop the secretions. To relieve the complications treat the disease itself and the complications will disappear. Copper sulphate is only indicated where the hypertrophy is marked and is to be continued but a short time and at greater intervals each succeeding application. A two per cent solution of nitrate of silver is much used, but care should be used in its application and especially when there are corneal ulcers and pannus to keep it away from the cornea. Do not bandage an eye while there is trachoma with any secretion for the infection will be more easily spread to adjacent tissues. In cases associated with ulcers of cornea and especially with Iritis instill into the eye a one-half per cent solution of sulphate of atropine every one or two days to keep the pupil dilated so there will not be the formation of posterior synechiae or adhesions. For the corneal ulcers there is no better remedy than an occasional application of Iodoform and frequent instillations of a saturated solution of boracic acid. In cases resulting in extensive pannus use a 3 to 5 per cent infusion of Jequirity till an acute inflammation is started. Very often a complete removal of the pannus is the result. Of the sequelae trichiasis and entropion, as well as ectropion operative treatment alone suffices. For symblepheron posterius no treatment is successful. The same is the case with xerophthalmia except, to keep the eye moist with applications of milk, glycerine or some other mucilaginous substance.

But the treatment that has been most successful with me is the use first of solution nitrate of silver following it up with sulphate of copper, for a few times and then using thereafter alum. All the while having the patient make from four to six applications daily of a saturated solution of Boracic acid. In most cases a cure will be effected inside of six months. The chief barrier to this mode of treatment is the fact that the patient as soon as the irritating symptoms cease stops treatment thinking himself cured. The most satisfactory treatment however is expression of the papillae or granules, or both, by means of the forceps.

The best and most safe forceps is the Staf-

ford modification of the Knapp roller forceps. On this the roller is smooth.

For the anaesthetic apply cocaine hydrochlorate in the powdered form.

After perfect anaesthesia evert the lid and apply the forceps to the hypertrophied spots or papillae and granules and express the contents out of each. When all are expressed that it is possible so to do with this instrument, express the few remaining scattered ones with Prince's forceps. The whole operation will take but a minute or two. After expression apply a solution of Bichloride of Mercury, 1,500 by means of cotton on an applicator till the raw surface again bleeds. Then wash this off with a very mild solution of Boracic acid or distilled water.

The after treatment is the very frequent application of a saturated solution of Boracic acid.

In a week or little more, there is a perfect cure from trachoma.

The most important treatment in a prophylactic way is to practice untiring cleanliness on our part lest we convey the infection to some other eye, our own or of those we have occasion to touch.

Never touch an eye in practice without cleansing your hands both before and after doing so. Teach the patient to have his own linen, bed, towels, handkerchiefs, sponges, brushes and basin and other articles of the toilet and bath separate from that of the rest about him.

If only one eye is affected tell him how to prevent its infecting the other eye.

Also explain to him the importance of his own personal cleanliness and the dangers arising from this negligence of the same.

Explain to him the danger of its spreading and the severeness of the case and how much depends upon his following your directions.

Most important of all. Explain to him plainly and forcibly the way infection takes place that he may be constantly on guard not to transmit it to others.

An interesting and important paper was presented by Dr. F. D. Rathbun on Records and **Contagiousness of Typhoid Fever** and the vitality of the Typhoid Germ, which was taken up and thoroughly discussed.

J. F. Percy of Galesburg, was with us as State Councillor, representing the State Society and in his remarks gave many interesting points why we should organize. In conclusion he read us a paper on **Intestinal Obstruction** from the standpoint of the physician who first sees the case, which proved to be a rare treat as it included a specimen removed from the patient and the patient who was present himself, making a good clinic for the Society.

A. N. Mackey, Official Reporter.

The McLean County Medical Society met in the City Hall, at Bloomington, September, 3, 1903, with Dr. F. C. Vandervort, presiding. After the minutes of the last meeting were read and approved the president made a report for the program committee. Articles VII and VIII of the Constitution were amended so as to be in harmony with the constitution of the State Med-

ical Society. The censors reported favorably upon Dr. L. J. Hammers, of Lexington and he was voted a member of the society.

An executive committee of four to act with the president in appointing the "Sub committees on Arrangement" for the Illinois State Medical meeting to be held in Bloomington next May was elected. This committee consists of Drs. C. M. Noble, F. J. Parkhurst, E. Mammen, J. Whitefield Smith and the president, Dr. F. C. Vandervort.

Dr. A. E. Rogers reported to the society a case of "Tetanus" following confinement. The woman was delivered on Friday by a midwife and the doctor was called in about Monday midnight. The patient had had a bad headache during the entire day. Pulse and temperature were found nearly normal. Symptomatic treatment instituted during the night. In the morning a marked trismus was present and with the advice of a consultant Tetanus Antitoxin was freely injected beneath the skin. Urine was found normal now as well as day before. The improvement following the use of the antitoxin was very marked until the next morning at 10 a. m., from which time the patient grew rapidly worse without any apparent cause and died about noon. The peculiarities of the case were the rapid onset, coma and no convulsions. In the matter of treatment the antitoxin undoubtedly caused a marked relaxation of the trismus for the first 18 hours after its use.

Four other cases were reported but these were quite typical.

Dr. R. G. Yoltan reported a case of **Sudden Death of Mother** three days after confinement. Forceps were required and chloroform was administered though not to the point of surgical anesthesia, during the delivery. After the baby was born patient came readily out from under the anesthesia. Next day an irregular pulse was noticed, but patient gave no subjective symptoms of any heart trouble. Died suddenly the following day without any further warning.

The society adjourned to meet in two weeks from date to hear the report of the executive committee.

Personals.

Dr. E. L. Brown has moved from South Dakota to Bloomington and gone into practice with Dr. D. H. Nusbaum.

Dr. C. M. Coen, formerly of Bellflower has moved to Streator, Ill.

The McLean County Medical Society will celebrate its golden jubilee next April. Ever since its organization it has been an auxiliary to the State Society. There were fourteen charter members all deceased with the exception of Dr. C. R. Parke now of Louisville, Ky. Dr. Parke was in active practice in Bloomington until one year ago.

A. F. Kaeser,
Official Reporter.

The McLean County Medical Society met at the City Hall, Bloomington. Dr. Carl Black, president of the Illinois State Medical Society; Dr. Sullivan of Cairo and Dr. Harvey of Griggsville, members of the Council were present at our meeting.

No other business coming before the meeting Dr. T. W. Bath proceeded to read a paper

on **The Relation of Mosquitoes to Malaria Fever.** In the brief time allowed for a paper on this subject, it is evident to all that only a phase of the subject can be developed, while the major portion must be passed over.

In the following pages I shall say nothing of symptomatology, pathology and treatment, but prefer to give you the etiology of the disease and a brief sketch as to the methods whereby certain definite facts were established. These facts are based on the newer literature of the day resulting from prolonged observations and experiments in the realms of comparative biology, without which our glorious science of medicine would never have been advanced.

This paper is based on the newer literature, upon my correspondence with many scientific men, and upon my own feeble observations while serving as army surgeon in Cuba and the Philippine Islands.

The credit is given to Laveran, a French army surgeon, who, while on duty in Algiers in 1880, first discovered the plasmodium of malaria in the human blood. This discovery, in connection with many like discoveries which radically upset old theories, was either ridiculed or damned with faint praise. Two years later Richard discovered the plasmodium to be intra-corporal, which Laveran had thought to be extra-corporal. But Laveran's discovery was not confirmed by the scientific world until Celli and Marchiafava, two Italian investigators demonstrated that the "Melanin which is characteristic of this infection was formed within the parasite." These investigators and Golgi were also the first to point out the different life cycles of the now known Testian, Quartan and Estivo-Autumnal types. The truth is that in my judgment the bulk of all the greater original investigations has been done by the Italian scientists, who singularly enough have unfortunately been deprived of the honor of making the most signal points of discoveries which have completed for us the chain of evidence in the di-morphic theory of plasmodium contagion.

In 1882, shortly after Laveran's great discovery, Pfeiffer and others of Germany entered up a series of studies in the realm of the human protozoic parasites from which, for convenience, the classification of the protozoa are divided into three divisions, with respect to their morphology. It is with reference to the second class, the order of sporozoa and its subdivisions of coccidia and haemo-sporidia that Pfeiffer discovered that the coccidia (a sporulating animal cell, living and sporulating in the cell structures of man) had a double or dimorphic life. In its intra cellular human habitation, it reproduced itself a—sexually, i. e., by simple fission. In its extra corporeal life—that is, living outside the human body, it reproduced itself sexually, that is by true fertilization of a male with a female element. Studies along this line gave rise to a new pathological finding, known as coccidiosis. The morbid lesions in the human being were cysts of the various viscera accompanied by purulent exudations. Presumably the coccidia completed its second cycle of life in some of the lower animal forms.

In 1887, Mechnikoff, intuitively reasoned that

the plasmodium of malaria was a protozoon (the lowest class of one celled structures in the animal kingdom) related to the coccidia whose studies had just been elaborated by Pfeiffer and others, and that it was a haemosporidia, that is, it reproduced itself in the blood. Here again the Italian investigation confirmed a theory and Celli with his associates laid down four laws which pertained to the existence of the haemosporidic parasite:

1. The haemosporozoa lived at the expense of the red blood corpuscle.

2. It had a cellular structure, endowed with abundant chromatin.

3. It underwent two phases of life, not the dimorphic, within the blood corpuscle.

4. Inoculations produced the same disease.

Coincident with Laveran's discovery of the plasmodium, and Pfeiffer's elaboration of the dimorphic theory, other investigators were pursuing researches in the blood of frogs, turtles, reptiles, birds and warm-blooded animals. In the blood of reptilia and batrachia a parasite or "blood-worm" was found. Laveran's finding of the plasmodium in the human blood was found to have an analogous relation to the parasite in all orders of the lower creation. Except that in cold-blooded vertebrates and batrachia, no effect was observed on the hemoglobin of the blood. However in birds and warm-blooded vertebrates the destructive effect on the hemoglobin was the same as observed in the blood of man, that is the hemoglobin was abstracted and replaced by melanin, the digested residue of hemoglobin. The reproduction by subdivision in the blood was the same, each new set of spores sent out anew into the blood being endowed with a nucleus of chromatin which had been robbed from the parasite's host.

The studies on birds were particularly interesting. Here the French scientist Lathe divided the proteozoon (malarial) infection of birds into two classes the knowledge of which has been of help to find the missing link in completing the chain of evidence in human malaria. These divisions are known as the halteridium and proteosoma. Each relating to the particular form of infection and cycle of intra-corporal existence of the parasite. The common crow may contain a type of malarial infection known as halteridium while the English sparrow seems to be typical of the other form of bird malaria known as proteosoma.

The halteridium is a form of blood parasite which produces flagellated forms and crescents similar to the estivo-autumnal type in man. Search for the halteridium type in animals has been fruitless, neither has the definite host been found, but the contagion is widespread particularly in crows. McCallum of Baltimore, in his studies on bird malaria has observed in this form the very interesting phenomenon of sexual fertilization of one male cell element (microgain, etc.) with that of a female cell element, (microgain, etc.) In this type there is a rapid destruction of red blood corpuscles and a deposit of melanin quite similar to the estivo-autumnal type in man.

In the type of proteosoma, in English Sparrows, there is not the rapid blood destruction as in the other type, no crescents or flagella

a float in the plasma and in short a type of malaria quite similar to the milder types, tertian and quartan, as found in man. The definite host being the gray mosquito or *Culex pipiens*.

I have purposely led you a short cut through the winding maze of comparative biology in order that you might the more intelligently grasp the theory of evolution of the di-morphic cycle of the malarial parasite as found in the blood of man. Had the studies of the plasmodium been confined simply to the parasite without reaching into comparative biology we would today be ignorant of the complete cyclic existence of this parasite; and would be unable to intelligently deal with it from the point of preventive medicine.

The results attained in this field have not come by fortuitous circumstances. The pioneers in this field, when they found that malaria and yellow fever were not contagious diseases, that is, that the individual of himself was not capable of transmitting the disease to another of his kind, made diligent search for that host in which they knew the extra-corporeal (that is, existing out of the human body) parasite must live and complete its evolution. All scientists recognize that nature has made due provision for the perpetuation of her species, and that if malaria in man cannot be transmitted to man without an intervening agency, the problem was to find that agency.

Ross, who between 1895 and 1897 made over 1,000 *Culex* mosquito dissections in India, was finally led to dissect the *Anopheles* mosquito under Manson's suggestion that "each haematozoan probably requires a particular species of mosquito." Prior to this Manson had said that the homologues of the sporulating forms of an intra-corporeal organism, or in plainer language, the flagellae were the sexual spore fertilizers in both man and mosquito. Therefore with this idea in view, Ross hatched *Anopheles* from the larvae and caused them to bite persons suffering with the estivo-autumnal type of malaria. Day by day he made fresh dissections of the mosquitoes, when about the fourth or fifth day he discovered a pigment in a parasitic cell which was bulging from the posterior stomach wall of the mosquito. Not finding this pigment or parasitic cell in control mosquitoes he instantly realized that he had discovered the long sought evidence, viz., the sexualizing of the parasite within the stomach of the mosquito. Upon bursting about 10,000 sporites were let loose in the lacunar circulation of the mosquito, invading its salivary gland and by its bite injected into the human blood, thus they found their way into the blood corpuscle, there to begin their second cycle at the expense of the host.

This complete evidence which I have sketched concerning the origin, propagation and infection of the malarial parasite is indisputably correct and the profession as a whole must accept it. No longer will the intelligent laity accept statements from physicians that they "have a touch of malaria, or that the country is full of malaria," for such things are not true.

From the foregoing it will be understood that in order to become infected from the mosquito bite, that the mosquito must have previously

bitten some person suffering with the disease. Were this not so, it would be difficult to eradicate this disease, for I here exhibit the larvae and fully grown *Anopheles punctipennis* which I have caught quite plentifully in our neighboring creeks. All that is necessary to cause an epidemic of malarial fever is to import some one already suffering with the disease, allow him to be bitten with the *Anopheles* variety of mosquitoes, and in turn, whomsoever those mosquitoes bite in the future after the parasite has completed its sexual development within the mosquito, that person will become infected.

There are three general types of malarial fever. The tertian, which completes its cycle every 48 hours. When the attack is daily, it is called the quotidian, which is nothing more than a double infection of the tertian. Each set of the parasites undergoing alternate sporulation. The quartan is the three day type, requiring 72 hours to complete its sporulation. These two types are the most common, and the tertian being of the two by far the more common. In fact quartan malaria is fairly rare. The estivo-autumnal or summer-autumn type, known as the remittent fever, differs from the preceding types in that there is no period of remission but from the onset the temperature is high, with some variations for a period of ten days to two weeks when there is a gradual decline. This type should in my judgment be called by either one of two names, and thereby prevent much needless confusion. Either call it *aestivo-autumnal* or continued fever, and do away with misleading designation. The *Aestivo-autumnal* type is likewise subdivided into the quotidian and tertian forms. The Italian investigators have been the first to make this claim which has been substantiated in this country by my colleague, Surgeon Chas. F. Craig, pathologist to the Army Hospital at Presidio, California. In 5815 blood examinations made from June 30, 1900, to June 30, 1901, on soldiers returning from the Philippine Islands, 643 showed the malarial parasite. It must be borne in mind that from the home start at Manila to San Francisco, is an average of 30 days voyage, any symptoms of malaria manifesting themselves would be promptly treated by the ship surgeon, hence this accounts for not finding a greater per cent of infection. Of the 643 cases, the classification is as follows: tertian, 220; quartan, 3; estivo-autumnal, 423, divided as follows: tertian estivo-autumnal, 327; quotidian estivo-autumnal, 64. The remaining 52 were combined infections, the quotidian estivo-autumnal, according to Dr. Craig, is the kind which produces the pernicious fatal forms of the disease. Every corpuscle contains a parasite, some kinds two.

Malaria is today, even with cheapened quinine, the second most fatal disease on earth. In a medical meeting of southern men, one physician quoting Osler who said "Tuberculosis was the captain of the men of death." One other physician present paraphrased it by saying then "Malaria was its first lieutenant." Today malaria destroys 15,000 lives each year in Italy alone. Fifty to sixty per cent of the deaths in Greece are due to malaria. It is the scourge of our own fair south. A recent publication declaring 15,000 people die each year of the dis-

ease in the southern states. The American army while on duty in the southern camps and in Cuba and the Philippine Islands became infected almost to a man. In my own command of nearly 300 men in northern Luzon, not a man escaped. The history of white settlements on the Isthmus of Panama is a history of death caused by contaminated mosquitoes. The Panama railroad built in the forties, a line of nearly 50 miles, cost a life for each tie laid. A few years ago after Stanley had completed his explorations of the interior of Africa, a short line of railroad was built from the coast to Leopoldville just in the interior. It was thought that Chinese would be the best help to employ. Consequently a large number were brought in and all died to a man—mostly of malaria.

The sad difference between malaria and yellow fever is that there is an attack of yellow fever produces immunity while one infection of malarial fever predisposes to another attack. Stanley observed that the blacks of his caravan seemed to suffer no immunity from attacks in especial malarial districts. The English surgeon of Stanley's expedition stated that each white man on the exploration, during three years in the African wilderness and a travel of 5,000 miles, averaged 150 distinct attacks.

At the beginning of the war with Spain, our government, realizing that eventually troops would be quartered in the tropics sent Col. O'Reilly, now surgeon general of the army, to Jamaica, to get an intelligent idea of health conditions there with reference to the British troops. Jamaica had borne the ominous sobriquet the "Graveyard of the English." The first troops arrived there in July, 1779, 1,008 strong, and were quartered at Kingston. In four years the whole command was dead. The following year 387 men were landed, 155 died in a year and 200 of the remainder perished in an expedition. A few months later 791 landed. In two years they lost 500 men while stationed in the most healthy locality. And so on the history of the British occupation of Jamaica reads like a horrid dream that freezes the blood. 'Tis true yellow fever and dysentery might have aided largely, but it is safe to say that malaria by reason of the constitutional debilitation largely prepared that host for the regions of death.

As a prevention we may summarize briefly:

- 1st. Drainage of all accessible pools.
- 2d. Free use of coal oil twice per month on all surface water.
- 3d. Protection of the person by masks or gloves from the bite.
- 4th. Thoroughly screening the houses and occasionally fumigating if necessary to destroy those uncaught.
- 5th. Through isolation of the infected patient by screens to prevent any of the anopheles which may be present from ingesting the patient's blood and thereby becoming the carriers of the disease to others.
- 6th. Keeping up a prophylaxis by either quinine or arsenic.
- 7th. Careful occasional hunts for the anopheles, and their destruction.

The Military Tract Medical Association held its sixty-fourth and annual meeting in Peoria,

October 15th and 16th. It was one of the most interesting and profitable meetings of the society for years.

The attendance was good and interest was general during the entire two days session. We were the guests of the Peoria Medical Society during our brief sojourn in their city and the social functions were well planned and thoroughly executed for the comfort and entertainment of the members and their ladies who were in attendance and there were a goodly number of "the ladies" present. The scientific program was completed and liberal discussion of most of the papers read occurred. A pleasing feature of the second days session was a visit to the association meeting of the highly regarded, indefatigable president of the State Medical Society, Dr. Carl E. Black, of Jacksonville, who on invitation of the presiding officer, Dr. Coleman, gave a very interesting address on general topics of interest to physicians and particularly on **organization**, on which special topic we have all come to know him as **authority**. Our society is in good financial and working order. Galesburg was selected as place of meeting in October, 1904.

The following officers were elected for the ensuing year: President, H. C. Hopper, Galesburg; 1st Vice President, W. S. Holliday, Monmouth; 2d Vice President, J. A. Kirkland, Cambridge; Secretary-Treasurer, C. B. Horrell, Galesburg.

A unanimous vote of thanks to the Peoria Medical Society for their arrangements for our comfort occurred and adjournment.

The scientific program follows:

1. J. E. Coleman, Canton—President's address.
2. F. B. Dorsey, Keokuk—Appendicitis—When shall we operate?
3. J. P. Roark, Bushnell—The Antiseptic idea and its influence on the practice of medicine.
4. S. C. Stremmel, Macomb—Hospitals in the smaller cities.
5. H. H. Fletcher, North Henderson—Chylous ascites.
6. L. R. Ryan, Galesburg—Rhinitis Atrophica Anteriora.
7. Frank P. Norbury, Jacksonville—The treatment of Neurasthenia.
8. E. C. Franing, Galesburg—The only original Galesburg male quartette—obstetrical.
9. O. B. Will, Peoria—The significance of uterine misplacements.
10. Otis Johnson, Quincy—Surgical subject, selected.
11. Miss Kittie Barrere, Canton—The value of an intelligent assistant in the doctor's practice.
12. Sumner M. Miller, Peoria—Liver Abscess, following Typhoid Fever. Report of a case.

C. B. Horrell,
Official Reporter.

Christian County Medical Society.

Report of committee relative to the collection of accounts.

As chairman of this committee I have found it quite a difficult task to frame a report that in any way comes up to my idea as to what I con-

ceived was expected by the resolution at our meeting last July.

This difficulty has been due to at least two causes, viz.: the lack of ability on the lines that should govern in such work and to the apathy of the medical profession in this County. For instance: Soon after being appointed to draft these resolutions, in company with the other members, I, in order to get the support and assistance of my local medical brethren, sent a letter directed to each of the members in good standing in my city and asked their assistance in drawing up these very resolutions, i. e., I wished to get their ideas and opinions as what they considered needed to set us right in our work.

I asked several of the profession why they did not give me assistance or at least reply to my letter and was told, what? Generally given a few words of commonplace remarks and the subject turned to other more congenial fields of conversation. I asked particularly one of the young members of the profession why he did not take an interest in the matter and he said he thought the older physicians should do the work, as he did not feel like setting himself up for a mark in the community. I told him that the older men would never do the work for the young men, as the ways of the old men were set and that they would not do that for the young men which they ought to do for themselves. He then asked me what the other young men said and were doing in the matter and I told him that they all wished as he did, to shirk their duty and put the burden on other shoulders. I told him that the other young men were like him, as he had told me he was in favor of raising the standard of the medical profession in the community, but every one wanted somebody else to do it. I quoted Ella Wheeler Wilcox's saying to him about the "Lifters and Leaners," "Wherever you go you will find the world's masses

Are always divided in just two classes.

And, oddly enough, you will find, I wean,

There is only **one lifter to twenty who lean.**"

After I received no help from my own townsmen, I sent a letter to each member of the committee for ideas and suggestions in framing this report and received three replies to the same. These replies have been very helpful to me and I now extend my thanks to those who have helped me.

Mr. President, notwithstanding the fact that I was aware of an apathy existing in the ranks of the medical profession, I must admit that I am amazed at the lack of interest in the medical profession pertaining to the financial welfare of itself. It must be largely owing to the false idea in our ranks that we are **not wage earners**, but somehow or other that if we set a price on our professional labor, it becomes, not a fee or a wage but that it is an "**Honorarium**," coming to us like the Chinese system, in the form of beggary, i. e., we must wait for the patient to set his price and estimation on our services. It puts me in mind of the story related to a medical man when he was seeking the reason why the medical men in England were so infrequently given titles, as compared to their worth and station along side the legal profession. He was

told that the social standing of the medical profession was about nil, because a **lord** has boasted of the fact that the medical man could always be hired for a guinea to examine his rectum.

The question before us is so important that the wonder is how the medical profession has succeeded in a financial way as well as it has; and, now, that we have been awakened, somewhat, to the requirements of modern methods of business, the pertinent question must be asked why shall we hesitate a moment to do as we should, and as every other profession, calling and trade has done, to organize and combine our energies and stand together as one man. Let our motto be that of the Three Musketeers, "**One for all, and all for one.**" Shall it be said of the medical profession, unlike all other callings, it is so fearful and distrustful of its own members; that it is so devoid of ordinary good business judgment and fair dealing; that it is so dishonest with itself; that its own members are so rull of bitterness and back-bitings toward one another that it will not enter into and keep an agreement pertaining to its own welfare?

I move that the following be adopted:

First. We, the members of the Christian County Medical Society, do hereby mutually promise and agree among ourselves and to each other, to be governed in our practice by the following rules and adopt as our prices the fees of the Pana and Assumption Fee Bill.

Second. That we will not bid for pauper practice.

Third. That we will not attend the paupers, nor do the eleemosynary or public practice at a less rate than the regularly established and recognized Fee Bill of Christian County.

Fourth. That in the distribution of the pauper practice of the County, no one particular physician shall be favored in such practice by the public authorities, but the patient shall have the privilege of choosing his own physician.

Fifth. That we discountenance the practice of making frequent and unnecessary visits to the sick, under the guise of "mere friendly calls" without price; that we will not render free service to others than members of the medical profession and their dependents; that "charity work" shall be considered as pertaining only to emergency calls to the worthy, indigent poor not having time to make the proper financial arrangements.

Signed, J. J. Connor, M. A. Reasoner,
M. W. Staples, F. S. North,
R. W. Johnson, C. W. Coe.

It was moved by Dr. Johnson and seconded by Dr. Connor that the resolutions offered by the chairman of the committee be received for further discussion at the next meeting of the Society, on January 15, 1904; that the same be printed and distributed to each member of the Society, that they become familiar with their import before the next regular meeting in January, and that any member who may think he has something better to offer on the subject be asked to send the same in writing to the secretary that it may be discussed along with the above resolutions relative to adoption. Motion carried.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street.....	President
FRANK X. WALLS, 4307 Ellis Avenue.....	Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....	Treasurer
W. A. EVANS, 103 State Street.....	Chairman Medicolegal Committee
WM. HARSHA, 103 State Street	Chairman Membership Committee

NOVEMBER, 1903.

The Chicago Medical Society held a clinical meeting in the Schiller Hall, 103 Randolph st., Wednesday evening, Oct. 7, 1903, at 8 o'clock.

The following cases were presented:

Congenital Dislocation of Hip.

Rosa Englemann: This boy is two and a half years old. I first saw him about six months ago. He was born in Russia, the fifth birth, preceded by two abortions at the fifth and fourth month. The mother while carrying the child had uterine hemorrhages from the fourth to the sixth month after which they ceased. Labor at term was rapid and without complication. The mother says he walked at the eleventh month and she noticed no lameness at that time. It is very probable that his lameness did not appear then, that the head of the bone did not leave the acetabulum until pressure was made upon the limb. About the first year he was put to bed for some months because of the deformity and lameness but there was no fever nor pain nor swelling around the joint pointing to a coxitis. There was an abscess in the groin of the lame side at this time that left a linear scar.

I saw the child at the second year. He was well nourished and healthy except for a rachitic head and some rachitis of the lower extremities, some bowing on the left side. I think you can see the deformity here over the upper posterior gluteal region. There is absolutely no pain or swelling, we can manipulate the joint and get quite an excursion, perhaps two inches. There is no restriction of movement in any direction such as there might be were it a coxitis with possible adhesions, or a trauma. Trauma of course is rare in the hip and especially rare in children. The mother is very anxious to have reduction done. Of course there is shortening of the limb but it can be pulled fairly into place. The position of the limb with eversion and abduction is opposed to anything like traumatic dislocation in which there would be inversion and adduction, and points almost conclusively to congenital dislocation.

Later Observation Leads to a Change in Diagnosis.

I must correct my diagnosis of congenital dislocation to one of pathologic dislocation since seeing the case with Dr. Mueller. He pointed

out the absence of the neck and head of the femur due probably to an antecedent osteomyelitis with such rapid destruction of tissue and repair as occurs in children that no inflammatory adhesions took place. This fact and the position of abduction and eversion in a posterior, superior dislocation (typical of congenital dislocation) where we would naturally expect adduction and inversion, misled me.

A. H. Ferguson: This is a most typical case of congenital dislocation. There is a shallow acetabulum with a fairly good head. Those conditions are more favorable to the open operation than to replacement according to the so-called bloodless method. I will take the opportunity in a few meetings from now to exhibit a case that I operated upon by the open method three years ago, without opening the capsule of the joint. I will briefly state what I did in that case. I made a long incision over the external aspect of the hip joint, exposing the gluteal muscles. I separated the muscles without cutting the fibres and exposed the capsule as well as the great wing of the os innominatum. Having done that I made a horse shoe incision going through both tables of bone, with a cartilage knife, then bent down a flap of the two tables over the head of the bone, packed it with gauze behind and sutured this flap to the capsule so that the head of the bone could never again come up to the great wing. That child has made a beautiful recovery. Without the danger of opening the joint we made a bony acetabulum. I think this method is worthy of mention and practice.

2. Presentation of a case of Adiposis Dolorosa (Dercum's Disease). Frank Billings.

Adiposis Dolorosa (Dercum's Disease).

Frank Billings: Before I exhibit the patient I wish to say a word about this condition. The disease called adiposis dolorosa or Dercum's disease, was first adequately described by Dr. Dercum of Philadelphia. It has not been reported many times, Dercum, who wrote the last report I have been able to find, in March, 1902, could find but 24 reported cases, including his own. Of these 24 recorded cases four were males and 20 females; one male reported by Evale, a second case by Viteau of Lyons, France, a third by Pare and the fourth by Dercum. There

are probably other cases in males reported since then, and of course a good many of both male and female not reported. In conversation with members of this Society I find several men here have seen cases but have not reported them.

Adiposis dolorosa as it exists is in a sense an accumulation of fat about the body, and some of the reporters divide the cases into two kinds: first, those in which there is a fatty deposit which is localized and nodular, appearing chiefly upon the trunk and limbs, never upon the distal extremities. We never find an accumulation of any kind of fat, either the nodular or diffuse variety, upon the distal extremities, so the feet and hands do not show this accumulation of fat, indeed it was mentioned by most the reporters that the hands and feet are in a sense attenuated so that the tendons of the phalanges are more prominent than in ordinary individuals. In the nodular form the tumors vary in size from that of a pea, felt under the skin to large tumors, such as the ordinary lipoma. They are further characterized by the fact that a few of them may apparently coalesce and form larger tumors. They also have the peculiarity of migrating, the same as ordinary lipoma do, about the trunk.

The second general division is the so-called localized diffuse form. This is not tumor like but there appears about the upper arms or about the thighs or about the body an immense growth of fat.

Finally, a third, general diffused form in which the trunk of the body is greatly thickened by fat, and the lower portion of the abdomen will have such an amount of fat that the skin will hang down like an apron in front. One of the cases reported by Dercum, the only male, shows this in his picture, an immense fold of fat hanging half way down the thighs like an apron, and also over the posterior portion of the body.

This disease is characterized according to all writers not only by an accumulation of fat, but by pain. The pain exists in all the forms; it is found in the nodular form, in the tumorous form, and especially about the body. Not only is there spontaneous pain, neuralgic in character, but there is a soreness of which patients complain when the skin over the diffuse fat or over the nodules is touched.

These patients are usually nervous; they are asthenic, they show weakness that is not altogether due to the fat. They will tire easily and show fatigue on slight exertion. The last named symptom is so prominent a feature that it is really characteristic of the disease. Associated with the asthenia are nervous and psychic phenomena usually of a morbid nature as illustrated by this patient. He was despondent, as many of them are, and he was imaginative, the suggestion of pain today would make the pain tomorrow, and this is true of many of these cases. The same susceptibility to suggestion exists concerning medicine. If he were given a simple remedy and told that it would have a certain effect it would have that effect. A few of these patients will not only show the morbidness of the ordinary neurasthenic, but epilepsy has occurred in several of the reported

cases, notably in the last one reported by Dercum.

Sometimes these patients, especially the women, are hysterical.

The disease occurs among people in middle life. Most of the cases reported have been over forty years of age, one was thirty-five. It usually appears somewhere between thirty-five and fifty-five years of age.

The pathology of the disease is practically unknown. There have been certain things found that are suggestive but it can be best considered just now as a clinical entity without a known pathology. Among the things found at autopsy is an interstitial neuritis in the tumors, which has also been found in tumors removed *intravivam*. The nerves apparently increase in number in the tumor mass and there is an interstitial form of neuritis. In this case, in the tumors removed since he has been under my care, there is a dense fibrous network but apparently no increase by the Weigert and other stains, of the nerve tissue of the part, and apparently no neuritis to be found. This is the case in a good many slides examined from several tumors removed. I have heard that tumors removed from this patient in another hospital showed the same condition, no neuritis but an increase to a rather large amount of the fibrous framework holding the fat. Otherwise the tumors looked like ordinary fat tumors.

There have been changes found, rather commonly, in the thyroid gland. Changes pathological in character: cystic thyroid gland; degenerative changes in one lobe of the gland; partial atrophy of the gland. These changes have been found in some cases but not in all so that this cannot be considered a part of the pathology of the disease. In one of the cases, reported by Burr of Philadelphia, some sclerosis or degeneration was found in the columns of Goll and especially in the thoracic region of the cord.

The patients usually live on and those that have been observed and watched long enough grow weaker and the psychic phenomena more developed. Some of them have epilepsy and go into an imbecile stage, others become mentally disturbed, and they often die of some intercurrent affection. In one of Dercum's reported cases it was nephritis, in others it is weakness of the heart, and so on, that causes death.

Narration of Case: This man came from Beloit, Wis., that I might show him to you to-night. You will see scattered all over the body these nodular masses. Everywhere about the trunk and running down upon the extremities you can feel these tumors. These scars are where tumors have been removed. He does not present quite the characteristics he did when I first saw him, or when Dr. Preble saw him. You will notice that his chest is large and heavy and he presents a curvature of the spine, a stoop shouldered condition, which has been associated a good deal, probably, with the asthenia that has been with him so long.

The history is briefly as follows: He is 45 years of age. Presented himself to my clinic on the West Side in May of this year and I induced him to remain in the Presbyterian Hospital for a time. He was there from May 3d to June 1st, so I was able to make a good many clinical

observations. He says his father died of old age, the mother died at 76 years of age of what was called heart failure. He had no brothers or sisters, no family history of any chronic disease; no relative that suffered from a similar complaint or was very fat. He suffered from the ordinary diseases of childhood, gives a history of a purulent discharge from both ears for many years when he was young. Nineteen years ago he had an attack of intermittent billious fever extending over a period of months, six weeks of which time he was confined to bed delirious. Almost all his life he has been troubled with attacks of vertigo which have come on from time to time, more frequently in warm than in cold weather, and more often when he was younger. The attacks came on suddenly and lasted from three hours to two or three days at a time during which the patient could not walk about, or could only walk with difficulty. He would fall during an attack but never lost consciousness. On inquiring into this symptom I satisfied myself that it was not an epileptoid seizure from which he suffered at such times. Bending forward often caused this vertigo.

Fifteen years ago the patient was in a railway accident, he was an engineer, and sustained a fracture of the sternum and three ribs and received a severe blow over the spine from the 8th to the 10th thoracic vertebra, as he described it. The patient has always been stout, until fifteen years ago he possessed unusual strength. He worked as an engineer and general mechanic until seven years ago, and says his work has been hard. For the past seven years he has been able to do but little work of any kind because of the asthenia. He has never used alcohol or tobacco and denies venereal infection.

The present trouble began, the patient says, twenty years ago, when he noticed a number of small nodules subcutaneously in the right forearm. They varied in size from an inch in diameter, were firm, easily palpable and not painful. They gradually increased in number, principally on the arms and lower extremities but not on the trunk, until six years ago. The individual tumors did not increase in size after they first appeared. Six years ago tumors appeared on the trunk, most numerous in the lumbar region. From the first they have been painful, the patient referring to the pain as shooting and neuralgic in character. On two or three occasions he has submitted to surgical operations for the removal of tumors and this has given temporary relief but new growths have invariably appeared in a short time in the vicinity of those removed.

In addition to the presence of the tumors and the pain the patient complains of great weakness, particularly in the lower extremities, much more pronounced in the last year and a half. He has gained 77 pounds in weight in the last six years. This gain has been gradual, but more marked in recent times. During the past six months he has had some blurring of vision with occasional diplopia for short intervals. There has been loss of sexual power for two years.

When the patient presented himself measurements were: height, 5 feet 10½ inches; right upper arm, 15¼; right forearm, 12¾; left upper arm, 14½; left forearm, 13; right thigh, 28 above,

middle 25, lower portion 19¾, at the calf 18½; left thigh, upper portion 27¼, middle 24½, lower, 19¼, calf 18.

Negative signs were found about the head except the eye examination. The extrinsic ocular muscles were normal in movement. Chest and lungs negative. Heart, lower border, as far as could be mapped out, at the third rib; the left border extended two inches to the left of the left nipple; the apex could not be located. Abdomen prominent, somewhat pendulous, presenting rather large folds falling down over the abdomen. The walls of the abdomen are thick but differ in different portions because of the tumors which could hardly be discerned some of them lying very deep in the superficial fat. Reflexes in the extremities present, the knee jerks differing a little, one being stronger than the other and differing from day to day as he was in the hospital, sometimes almost absent, sometimes exaggerated. There was ataxia of station the patient falling backwards when the eyes were closed. Cutaneous sensation over the entire body was normal. Patient complained of all sorts of paresthesias. He could distinguish touch with the head of a pin, and tell the point from the head; he could tell a camels hair brush as it touched him, and distinguished between heat and cold. The pain sense was not increased under hyperesthesia apparently, although when he was excited he was full of ideas of illness, and imaginative. Scattered over various parts of the body, particularly the arms and forearms, the chest and lower extremities, are numerous subcutaneous nodules varying in size from that of an almond to three inches in diameter, firm to the touch, movable to the skin of the extremities, not painful to pressure. Those on the trunk are sensitive to pressure. The patient says that the tumors about the trunk sometimes give spontaneous pain while those on the extremities never cause pain. The eyes were examined by Dr. Hotz. Right vision was 20-50, corrected vision brought to 20-30. In the left eye vision was 20-50, no improvement. The upper part of the disk of the left eye was slightly grey. Fundus of the right eye normal. The arteries appeared somewhat thin. While looking at the test types vision became occluded every few seconds owing to the rapid exhaustion of the nerve function. Examination did not reveal any diplopia due to affection of the ocular muscles. The patient's temperature was slightly elevated the first few days in the hospital, 99.6 was the highest. The pulse was rather rapid varying 90 to 112. Respirations practically normal. The urine, examined several times while he was in the hospital, was practically normal, a 24 hour specimen showed 1060 c.c., specific gravity 1027, no albumin, urea 20 per cent, 66 grams of total solids, no casts found in fresh specimen. Blood examination, 4,072,000 reds and 82 per cent of hemoglobin, practically normal blood, with slight anemia.

The tumors removed from the patient's back on the left side and examined by the pathologist of the hospital showed an ordinary fat tumor with rather an abundance of fibrous stroma without recognition of an increase of the nerve fibres within and no neuritis. The patient therefore presents all the phenomena going to

make up the disease of so called adiposis dolorosa, that is, fatty deposit in the nodular form, increase of that more rapidly in the later years, associated with pain and tenderness, especially over the body, showing the characteristics that mark asthenia and associated with the nervous and psychic phenomena I have mentioned. His thyroid gland could not be discovered on palpation.

Because of his apparent apathy and asthenia, the increase in gross weight, the presence of so many of the phenomena of myxedema, yet without the idea of its being myxedema, and knowing that thyroid gland had been used in this disease, I placed him upon Merck's thyroiodine. I have used it for several years in place of the extract of thyroid gland, with the idea that one got rid of the possible ptomaines or poisonous materials found in the extract. Although I must say that the thyroiodine will produce practically the same phenomena, dizziness, rapid pulse and many of the symptoms that have been ascribed to extraneous substances in the thyroid extract. But it is a clean drug to use. I put him on one grain doses three times a day at first, and I said to him that possibly he might become a little dizzy, as he did, but since he was open to suggestion that might have been the cause. One grain of thyroiodine is equal to five grains of the extract of thyroid gland. He was kept on this, the dose being gradually increased, while he was in the hospital, with the result that he was better mentally, did not complain so much of the asthenia, but he was morbid and imaginative and had pains and tenderness, especially in his back at a point where he was injured many years ago; he has always complained of that, he says now it is the only place he has pain. He then left the hospital and went home. I wrote to his physician and the thyroiodine has been increased until he now takes eight grains, two grains at a time four times a day. He weighed 276 pounds when he entered the hospital and has lost forty pounds since. From a melancholic he has come to be a man who is now hopeful. He was doing nothing at all and now he has a useful occupation, is happy and grateful.

M. L. Harris: I rise to mention a similar case I had a short time ago at my clinic at the Polyclinic. The patient was a woman past 40, from the lower walks of life and addicted somewhat to the alcohol habit, which she says, however, was induced by the pain. She had multiple painful fatty tumors in both upper extremities. They were limited to the upper extremities, there were no painful tumors on the trunk. The tumors extended from the shoulder to the forearm and were so painful to the touch that at night she was obliged to lie with her arms outside the cover because the weight of the bed covering was so painful it kept her awake all night. In rubbing the hand over her arm whenever one of the nodules touched she said it felt like a sharp electric shock and was painful. They seemed to be more painful to a light touch than to pressure; if they were pinched they were not so painful as when lightly touched. I removed thirty of these tumors from her arms; all that were painful. They varied in size from a large pea to per-

haps 2½ centimeters in diameter. A number of the tumors were submitted to the microscope but we were unable to discover anything special regarding the pathology. They were all in the subcutaneous tissue, all sharply defined from the surrounding fat, all enucleated very easily. After the removal of the tumors she was relieved of her trouble. I saw her a year afterwards and she had no recurrence of the tumors and was free from pain.

L. C. Pardee: I had a short experience with this same case in Wesley Hospital, and with the idea of eliminating pain in the nodules I tried the application of the high frequency current to them daily. At that time he was having muscular contractions and usually he could not get out of bed unassisted but at the end of the week he could walk down town very comfortably and at the time he left the hospital he seemed in good shape as far as the pains were concerned; the nodules of course remained unchanged.

Dr. Billings: I should like to hear a word on this case from the president.

R. B. Preble: I have nothing material to add. I saw the patient for a short time in Wesley Hospital this past spring, previous to Dr. Billings seeing him. At that time the patient was practically as reported except that the disturbance in the lower extremities was much more marked than later on. He was apparently suffering from hemiplegia and the question that came up at the time was had we the right to assume that one of these tumors had developed in the spinal canal, and if so whether it was sufficiently defined and localized to warrant an attempt to remove it by operation. Neither could be answered affirmatively; we could not say there was a tumor in the spinal canal, nor where located.

It might be interesting to note that we tried, not thyroiodine, but thyroid extract and it had no effect except for a few days. It made no difference what we tried for a few days there would be improvement and then things would go back again.

Frank Billings: It is somewhat interesting when one thinks of the possible pathology of these cases; when one thinks of all the clinical phenomena, especially the psychic state, the despondency, the apathy of the patient, the morbidness and imaginativeness, and the absolute feeling of the man that he could not work and would not work, that he had no hope of anything, associated with the increase of fat diffuse and nodular; that under the thyroid treatment there has not only been a diminution in the tumor masses but also a diminution in the general subcutaneous fat, and associated with that improvement, an entire change in the disposition of the man. He is now traveling around attending fairs renting stands and offering wares for sale. When Dr. Preble saw him the man could not have been induced to get up and shout or do anything else.

There was one thing omitted in my report: there are trophic changes in this case, hemorrhages under the skin, but without deterioration of the blood. Just as the trophic changes occur in myxedematous disease. There is no thyroid

change found on post-mortem in some of the cases. We cannot look upon this as a disease, it is a clinical entity.

3. (a) Report of a case of Encephalitis, with exhibition of specimen; (b) report of a case; Hemiplegia of the aged, with demonstration of the case, Charles Louis Mix.

Encephalitis.

C. L. Mix: Encephalitis is a disease about which there is a good deal of discussion and about which not a great deal is known. The term encephalitis has been used as long as neurology has existed as a science, but only lately are the limitations of the term beginning to be apparent, and at present a distinction made between a suppurative and a non-suppurative form. The evolution of the disease has been gradual. One of the first authentic subdivisions was worked out by Wernicke in 1881, when he reported polioencephalitis superior acuta, which involves the motor nuclei concerned in the innervation of the ocular muscles. In 1890 Struempell added a little more to our knowledge by reporting a series of cases for which there did not seem to be a good pathological foundation, a group analogous to poliomyelitis in the cord, or infantile spinal paralysis. His paper was challenged and not accepted for many years, but now neurologists, particularly Oppenheim, are beginning to agree with Struempell and to admit that there is no longer reason for doubting his statements.

By encephalitis is meant a focus of disease, usually occurring somewhere in the brain, being almost invariably limited to the grey matter. It is not a suppuration, and not a softening, as in encephalomalacia, but is practically an inflammation, sharply localized. The pathological findings are hyperemia, with a certain amount of serous exudation, sometimes hemorrhage from the blood vessels with a certain amount of diapedesis of the red and white corpuscles and a small amount of round cell infiltration. No pus is found in the focus.

The case from which this brain was obtained, entered Mercy Hospital one year ago under the service of Dr. Davis who kindly allows the use of the case. He was brought in at 8 o'clock at night, having been taken ill in the morning. By occupation he was a switchman. He went to work in the morning in good health; by ten o'clock he felt a sense of dizziness and discomfort of some sort and lay down in a box car where he was found unconscious at 2 o'clock in the afternoon. I saw him the next morning after he was brought to the hospital. The policemen who brought him were of the opinion that he had been sandbagged. Examination failed to reveal any signs of cerebral injury, and lumbar puncture was negative. He was in a state of coma. Nothing was to be found by physical examination, and there was nothing in the urine which would account for his coma. The possibility of the coma of pneumonia was thought of, but there were no signs of disease in the lungs. Nothing was noted in the man's facial appearance the first evening. The next morning when I saw him there was a slight amount of unilateral facial paresis. There was also a peculiar effect manifest in both external

recti, the eyes being jerked to one side and slowly returning to the midline, seeming to indicate a certain amount of irritation in the nucleus of the sixth nerve. Signs of focal trouble in the nuclei of both the sixth and seventh nerves led to a diagnosis of some focal disturbance in the pons, and since he had a marked leucocytosis together with a history of discharge from the ear on the side in which the lesion was supposed to be present a diagnosis of cerebellar abscess was deemed tenable, the idea being that pressure by the abscess upon the surface of the pons might give rise to nuclear symptoms.

He was operated upon by Dr. Murphy but nothing was found by needling, and in a few hours the man died. His temperature upon entrance was only 100°; it went up gradually to 102° and 103°, at which point it remained during the greater part of the last day. The pulse ran from 88 to 94. In the last few hours of his life as the morbid process evidently swept down through the motor nuclei of the medulla, the respiratory centers and the center for the cardiac inhibitory mechanism became involved, the pulse going from 90 to 160, and the temperature from 102.5° to 106.6° inside of four hours, and before death reaching 108.8° in the axilla.

The specimen shows an exceedingly beautiful focus situated exactly in the pons. The section is made through the mesial portion of the brain and here is the focus, which fulfills the description of Oppenheim and of those who have made postmortem examinations in encephalitis. It is not merely a case of encephalomalacia; there is no thrombus to account for it, and when we look at it microscopically we do not find secondary softening in this area. The tissue is all there unsoftened, and it is infiltrated with round cells. Moreover you can see in the microscopic preparations blood-vessels with the walls penetrated by red and white cells, and you can trace into the surrounding tissues the migration of these cells.

The other case I want to show you is **hemiplegia of the aged**, as it is called, and belongs to a type recently reported. In 1901 Marie published an article in the *Revue de Medecine* in which he makes the statement that in the majority of all cases of hemiplegia after 60 years, hemorrhage, embolus and thrombosis are not the causes of paralysis, but the cause is rather to be found in a lacunary process. In other words, he is of the opinion that there is arteriosclerosis of the smaller blood vessels, particularly of those in the central ganglia, the lenticular nucleus or optic thalamus, associated with a certain amount of absorption and serous exudation in the perivascular spaces. Marie has a service at Bicetre which is devoted entirely to old men, and his opportunities for studying the hemiplegia of the aged are therefore particularly good. Ordinarily the patients are seized suddenly, as in all cases of hemiplegia, but do not lose consciousness. They may be standing and fall suddenly to the floor; they get up and walk, but not quite so well as before. For a day or so they are quite paretic on one side of the body, or they may be exceedingly clumsy rather than paretic. There is also a certain amount of speech disturbance, consisting of inability to articulate distinctly. Recovery is rapid, the bulk of the cases

recovering completely inside of three months. The most characteristic feature of the case is the gait, called *marche a petits pas*. They take little steps not more than four to six inches in length.

This case came to Mercy Hospital in Dr. Edwards' service, and is interesting because it is of that type. This man is 63 years of age. While putting on his shoes one morning he suddenly fell forward. He did not lose consciousness. He came into the hospital the next day and walked in this peculiar way.

There is another symptom of some value in the detection of slight hemiplegia, reported by Arthur Schuler in the Jan. number of the *Neurologische Centralblatt*. If a man is paralyzed on the right side of the body, when he walks side-wise toward the right, he does so without particular difficulty, but when he walks to the left, the paralyzed leg drags. The explanation is simple; in a case of hemiplegia there is muscular and tendinous relaxation, so that the paralyzed leg is longer than the non-paralyzed leg. When he walks toward the paralyzed side he lifts the leg from the floor but when he walks away from the paralyzed side, the leg drags.

Sanger Brown: I have been very much interested in the presentation of these cases by Dr. Mix. I am a little skeptical however in regard to accepting the pathology of Marie regarding hemiplegia of the aged. I do not see that it is much of an improvement over our former notions. I have been accustomed to think that such light strokes, which entirely recover were due to small hemorrhages. But whether the first strokes, from which recovery occurs are slight hemorrhages or not there is no possible way of determining, but we can determine in a great many of these cases that the final stroke is one of hemorrhage; the autopsy proves that.

In regard to the other case I certainly think the doctor is to be complimented upon the very handsome specimen he has shown us and the excellent clinical history that went with it. I have always been inclined to accept the hypothesis of Struempell in regard to these cases. I do not see why an inflammatory process should be limited to the anterior horns of the cord, indeed why the same process may not occur equally well in the body of the peripheral neurone in the medulla, inasmuch as in the evolution of the neurone theory we regard the nuclei in the medulla as a differentiated anterior horn, so to speak, and an acute process might as reasonably attack them as those lower down in the cord. At any rate I think a progressive muscular atrophy, so called, that is progressive degeneration of the lower neurones whose bodies are in the anterior horns of the spinal cord is the same disease, characterized in the same way, running essentially the same course, whether it began in the nuclei in the medulla or lower down in the cord. The only difference being that it runs a shorter course when it begins in the upper portion or in the medulla simply because it involves structures which are essential to carrying on life.

Julius Grinker: This case of hemiplegia reminds me strongly of a case of so-called senile paraplegia I have under observation, where the patient 64 years old developed gradually a par-

aplegic, spastic gait with small steps. In my case the spastic condition of the lower extremities came on without any apparent cause, not suddenly but gradually and the patient sought relief for his slow walk. He is disabled from work by the fact that he cannot walk, that is his principal complaint. Upon conversation with him I find dysarthria and his mental powers are defective in that he cannot do the simplest sum in arithmetic, forgets the day of the week and year and even his birthday; otherwise he is rational; there are no other symptoms of dementia. I am inclined to call this senile paraplegia. It corresponds to the description given by Oppenheim and others, yet after hearing Dr. Mix's paper and seeing his patient I think it possible this might be a case of double senile hemiplegia and the dysarthria might have been produced in the same way as the dysarthria of so-called pseudo-bulbar paralysis. When a hemiplegia occurs on one side there is but little disturbance of function due to involvement of cortical equivalents of the medulla, knowing that the medulla is represented on both sides of the cortex and that there is a close association between the two sides, but when there is a double sided hemiplegia we do get the symptom complex called pseudo-bulbar palsy because the upper representation of the medulla has been destroyed on both sides. I think if it is possible to have a simple senile hemiplegia it is also possible to have a double senile hemiplegia in which the symptom complex of senile paraplegia is produced, and it is a question with me now whether the case under my observation comes under the head of senile paraplegia or whether it might not be called a double senile hemiplegia.

C. L. Mix: Marie in his account published in 1901 gives a number of cases where there were bilateral lesions and defects of mentality due to arteriosclerosis, and where pseudo-bulbar symptoms were present. In other words the whole group of cases of senile spastic paraplegia, and of double hemiplegia of the old, is the same thing. It is really a specialized variety of arteriosclerosis, which first affects the small arteries, next produces dilatations of the perivascular space, and lastly by releasing the arteries from the pressure of the surrounding nerve tissues, predisposes toward cerebral hemorrhage. Dr. Brown says these people after two or three mild strokes die of cerebral hemorrhage. So also says Marie. Indeed the patients are to be warned of hemorrhage. I thought it would be a good thing to bring this case before the Society, because it suggests a new pathology for some cases of hemiplegia. One of Marie's pupils, Jean Ferrand, in a Paris thesis of 187 pages, recently published reports of numbers of these cases. Whether there is anything in it or not I do not know. I, too, am skeptical in regard to the matter, being unwilling to throw overboard Charcot's time-honored theory and demonstration of military aneurisms; nevertheless I feel that anything emanating from Marie is deserving of respectful attention and examination, with careful search in post-mortems for the appearances here briefly referred to.

4. Presentation of a case on whom a nephrotomy, nephrectomy, urectomy, double epididymectomy and orchidectomy for genito-urinary

tuberculosis have been performed, Alex H. Ferguson.

Nephrotomy, Nephrectomy, Ureterectomy, Double Epididymectomy, and Orchidectomy for Tuberculosis.

Alexander Hugh Ferguson: Mr. Andrew L., now before you, is 43 years of age, weighs 208 pounds, and shows scars on the right lumbar and inguinal and right and left scrotal regions resulting from operations for genitourinary tuberculosis several years ago. While the abdominal wall is a little weak there is no hernia and although he has lost his right kidney and ureter and epididymus on both sides and the left testicle, he is able to work in his store every day, has gained 78 pounds in weight, is in excellent general health, urine is normal in quantity and quality and he is capable of satisfactory marital relations.

In 1890 his right kidney trouble began apparently the result of a chill following a wetting through and through from a cold rain. Within a few hours after his exposure he experienced a severe chill which was soon followed by a pain in the region of the right kidney, so severe in character that he sent for Dr. Jeffries of this city who gave him relief with hot fomentations applied locally and hypodermics of morphine. For seven years following this illness he suffered intensely from attacks of renal colic, becoming more frequent and severe each year. Eventually chills and fever were added to his recurrent attacks of suffering and when reduced to 130 pounds in weight, and no longer able to earn a living, he consented to an operation, which had been repeatedly advised.

Early in May, 1897, Dr. R. J. Ough of this city referred him to my clinic at the Post Graduate. He then complained principally of 1. Constant pain in the region of the right kidney for two weeks. 2. Attacks of exacerbating pain for seven years. 3. Tumor like swelling in right lumbar region developed recently and tender on pressure. 4. Chills and fever. 5. Radiating pain to right testicle and bladder during attacks. 6. Emaciation and weakness. The urine was scant, (acid in re-action and loaded with pus. The germs of tuberculosis were not found in it. It was evident that he had pyelonephrosis engrafted on stone irritation, or more probably tuberculosis.

On the 12th of May, 1897, I performed a rapid nephrotomy. The kidney and its pelvis were enormously distended with pus. A long incision enabled me to empty the pyelonephrosis speedily by mopping and liberal flushing with several pitcherfuls of water. Fully half the wound was left open, cavity packed with iodoform gauze and drained with two large rubber tubes. While immediate improvement was very satisfactory, the pus in the urine persisted, the kidney wound showed no attempt at repair, and exuberant granulation tissue, tuberculous in character, developed in the wound and invaded the subcutaneous fat, a microscopic examination of which pointed to tuberculosis.

On July 14th, October 13th, 1897, and January 5th, 1898, a free curettement under chloroform of the sinus (followed by carbolic acid 95 per cent cauterization) was made each time. Dur-

ing this period marked constitutional improvement occurred. He lost his hectic flush, fever and chills. His appetite returned and he gained 25 pounds in weight. With pus in his urine and a free discharge of pus and some little urine from the sinus leading to the kidney it was evident that more surgery was indicated. Before removing the diseased kidney an effort to learn the condition of the left kidney was made by means of the Harris segregator. I tried it thrice with the same result each time of obtaining pus from the left side and urine from the right of the bladder. The only explanation I can give is that the bladder openings of the ureters must in their development have crossed each other. The segregator demonstrated that urine was entering the bladder from one kidney only. The left kidney was palpably enlarged but not tender and most likely had been secreting nearly all the urine for several months. I had therefore no hesitancy in recommending a radical operation. February 19, 1898, I did a nephrectomy and a partial ureterectomy down to the bony pelvis. I button holed the abdominal wall nearly opposite the internal abdominal ring and brought the stump of the ureter through the opening and there fastened it. Owing to extensive and firm perinephritic adhesions the removal of the kidney was a difficult undertaking but nevertheless it was accomplished with dispatch without opening the peritoneal cavity. The organ was almost disintegrated, only a part of the upper pole could be microscopically recognized as kidney tissue and it too, was badly involved. The pelvis of the kidney was unrecognizable as such and the ureter was nodular and four or five times thicker than normal to near the brim of the true bony pelvis and completely occluded with tubercular products. His recovery from this operation was uninterrupted, leaving the hospital before the end of the fourth week in buoyant spirits, but with a healthy looking sinus, which soon closed.

April 20, 1898, accompanied by my friend Dr. Ough, he returned to my clinic exhibiting unmistakable symptoms and signs of double tubercular epididymitis. I then removed the diseased epididymus and vas deferens down to the vesicula seminalis on both sides, without injury to the testes or other structures which appeared not to be involved. The bladder, prostate and vesiculae seminales appeared normal. Again we had a beautiful recovery and he was discharged within two weeks after the operation. The laboratory report confirmed my diagnosis.

August 3d of the same year he came again. This time the left testicle had become involved and it too had to be sacrificed. There was a tubercular abscess in its interior.

The result of the nephrectomy in this case strongly supports primary renal tuberculosis and that the disease traveled down the ureter to near the bladder is undoubted. It is worthy of note that although the genitalia (epididymus on both sides, one testicle and vas deferens of both sides) became tubercular there has been no evidence of disease of the seminal vesicles, prostate or bladder. There has been no disturbance of urination and no urinary findings

to suspect disease of the parts mentioned. The interior of the bladder viewed with a cystoscope several times always looked normal and no tenderness of the seminal vesicles or prostate was ever discovered by rectal examinations. This rather disproves the idea that double tubercular epididymitis is only possible when the prostate is involved first. Painful and frequent urination usually the first symptoms of renal tuberculosis, whether the bladder was involved or not, was absent in this case. From the assertion of the patient that the urine had for seven years been cloudy and smoky in appearance off and on, points to hematuria as a frequent if not a constant sign.

His most prominent disturbance before mixed infection occurred was sudden and severe pain in the region of the kidney, intermittent and remittent in character simulating renal colic often so characteristic of stone in the kidney. This is unusual. The colic was of course caused by the passage of clots of blood or shreds of caseous matter. Now, however, the x-ray aids us in making a differential diagnosis, if both troubles do not co-exist, and even then the presence of stone is demonstrated.

This case illustrates the value of nephrotomy to nephrectomy when pyelonephritis is present. The evacuation and drainage of the pus enables the patient to improve so as to stand the nephrectomy later on, it being the more serious operation.

Although the tubercular microbe was not found in the disorganized caseous kidney tissue, it was discovered in the ureter, epididymus, testicle and vas deferens by Professors Klebs and Zeit. It was maintained by Klebs that the infection in the testicle excised was hematogenous and primary and that the disease of the epididymus that I had removed from it was quite independent. The testicle sacrificed had a tubercular abscess in its center, and inasmuch as there was no telling whether the other organ would become diseased or not, I have since often doubted the wisdom of the orchidectomy. I could have drained it and probably saved some of it.

In the surgical treatment of tuberculosis of the epididymus I am in favor of its early and extirpation. Along with it remove the vas deferens in its entirety, and should the seminal vesicle be also involved remove it too at the same time, through the perineum. I have repeatedly done this on both sides and established through and through drainage from both inguinal regions and omitting via perineal wound. In nearly all of my cases the testicle itself was not diseased. There are many personal and social reasons why the testicle should be saved.

-5. (a) Exhibition of a case of *Tabes* with "Charcot's Joint" affecting the hip; (b) Presentation of cases recently operated on for Fracture of the Patella, M. L. Harris.

Tabes.

M. L. Harris: This case promised to come down tonight but at the last moment refused to come. He is 49 years of age, had his initial lesion 8 years ago. He presents all the typical symptoms of *tabes*, incoordination in locomotion and station and the eye symptoms, loss of patel-

lar reflex, retarded sensation, etc. Up to the time he entered the hospital in August he was able to be around all right. Ten days before he entered he began to have trouble with his hip and leg, the leg swelled considerably and there was swelling about the hip. After entering the hospital and being put in bed under treatment the swelling diminished and he presented the characteristic symptoms of involvement of the hip joint. The case is particularly interesting because involvement of the hip joint is not so common as involvement of the knee in cases of *tabes*. It is also interesting from the amount of periarticular thickening we find. There is also a mass within the pelvis which appears to me to be an exostosis because of its large size, irregular outline and the fact that he has two smaller bony tumors one on each leg near the knee. The skiagraph shows a large amount of erosion and absorption from the head and neck of the femur and also a peri-articular deposit particularly above the trochanter major. The joint is not painful, the patient walks on it, and when he steps you see him sink down as the bone slides away up. It almost dislocates the range of motion is so great. He can walk on it and manipulate it without the pain which is characteristic of these joints.

Fracture of the Patella.

I was led to present these cases by an article which recently appeared in Langenbeck's Archives by Mueller of Berlin, on the treatment of fractures of the patella. In this article he attempts to show that fractures of the patella treated by non-operative measures have shown better results than those treated by operative procedures. As this did not accord at all with my experience in operating these cases, and with the experience of the American surgeon, so far as I am familiar with the work, I was led to present some cases. Mueller in his article says that the average length of time of the treatment of fracture of the patella by splints and bandages is 98.7 days, a little over three months. The average length of primary treatment, that is the time the patient is in the hospital, treated by suture is 93 days. The after treatment of fracture of the patella by the non-operative method is 169 days, by operative procedure is 218 days, or 40 days longer on the average when treated by the suture; that is nearly six months by the non-operative method and over seven months by the operative method. This did not agree with my own experience, and so I was led to present these cases.

Case 1. A young man 26 years old, had his patella fractured by the kick of a horse; a direct fracture of the patella a little below the center. It was a complete fracture not only involving the patella but the quadriceps fascia on each side so there was a wide separation in which two fingers could be easily laid. Furthermore, it was found at the operation that the lower fragment was everted so that every attempt to draw them together failed, the articular surface was the only one that could be brought in contact with the upper fragment. The fractured surface looked directly forward and against the skin so that any treatment by bandages, however well the parts might have been approximated, would

have failed. He entered the hospital December 24, 1902, operation was done within a few days and in less than a week he was up and around the hospital, leaving the 3d of February, 60 days from the time of fracture. He went to work a little over a month after leaving the hospital, say 100 days from the time of fracture he was at work and has remained at work since. The result is perfect, he has never had any trouble with the joint. He does all his work, runs, jumps, and dances without evidence of weakness.

Case 2. The other case, a young man 19 years old, had his patella fractured while wrestling. He struck his knee against his opponent, with sudden fracture of the patella a little below the center, with wide separation and complete laceration of quadriceps fascia laterally. He entered the hospital a little over three weeks ago. The patella was treated in the same way and for three weeks he has been up, he was in bed only four days, and then around with crutches.

I think the method of operating has a great deal to do with the result in these cases. You notice I turn down a large flap so there is no scar across the patella. I am very careful that the interior of the joint is not handled so that it be infected. I pass a wire around the fragments, the bone is not drilled. I use a bronze wire that has a great deal of tensile strength and this is passed around the fragments, twisted and left in laterally so as not to touch the articular surface. The aponeurosis is sutured together and the flap closed.

I had another case of refracture of the patella which I hoped would be here tonight. It had been treated with splints but after going out he made a mistep and fell separating the fragments again. I used the wire suture and he was out in two months.

I believe the statement made by Mueller is misleading and does not agree with the work of American surgeons in wiring this bone.

A. H. Ferguson: I agree with Dr. Harris in everything he has said in connection with fracture of the patella. Those cases I operate on early and we get exactly the same result Dr. Harris does, get them up in three weeks and they leave the hospital before six weeks, going to work in three or four weeks afterwards. So the statistics given by Mueller are not as favorable as those we get on this side. With regard to non-operative treatment, it is utterly impossible to get bony union in most cases because of one fact, and that is that you get a curtain of fibrous tissue implanted in the surface of the fracture, which prevents bony union. The patella is a sesamoid bone, it has fibrous tissue in front and when it fractures it over stretches and ruptures this fibrous tissue and when it goes back again we get that curtain, especially in those cases where the knee bends completely after the fracture; and then you have to operate to ensure bony union.

I was glad to see the horseshoe shaped incision made by Dr. Harris. I made it below instead of above this patella. A case I operated two weeks ago had the joint filled with blood and I had to wash it out with normal salt solution, and I then drained with silkworm gut from

both sides around under the patella, removing it after six or seven days. Silkworm gut will drain all the serum and no accumulation can take place in the joint. I use it exclusively in draining amputations of the breast and so on. The results of these two cases are complimentary to Dr. Harris and show good work.

M. L. Harris: I have nothing special to add. I would say that the blocks and clamp treatment goes back to my earliest recollection; we used them twenty years ago in Cook County Hospital in the same way, but we never found any clamp or dressing that would remove the fibrous tissue that falls in between the fragments, and never found any clamp that would approximate the aponeurosis of the quadriceps extensor when torn. The tearing of this aponeurosis is of more importance, or more damage to the patient than is a fracture of the patella in which there is no separation and no tearing of the fibrous extension of the aponeurosis. Such a fracture will recover with good functional results. But a fracture of the patella which is separated widely and in which there is laceration of the aponeurosis, when treated by the non-operative method is liable to be weak and the patient disabled on an average of 25 per cent in following his vocation.

These points, if there were no others, show the advantage of operative treatment in fractures of the patella in which there is wide separation and laceration of the fibrous aponeurosis of the extensor quadriceps. It is of as much importance to suture this fascia as a part of the extensor muscles as it is to approximate the parts of the fractured bone.

A regular meeting was held October 14, 1903, with the President, Dr. R. B. Preble, in the chair.

Xeroderma Pigmentosum.

James Nevins Hyde: With the permission of the President, I wish to interrupt the usual order of the evening by showing three cases of unusual rarity.

Our first knowledge of this disease (xeroderma pigmentosum) was obtained from observation of two patients made by Prof. Kaposi, of Vienna, in 1863. Subsequently, when he wrote on the subject in 1870, he had seen two more cases. A careful study of the records in Europe indicate that there are scarcely more than one hundred and ten cases on record there, and, including these three cases, we have a little less than a score on record in America. These three children are a brother and two sisters of one family. The father is a native of West Prussia; the mother of Oshkosh, Wisconsin; and they have had a family of eight children. Three boys born first are perfectly well; then came these three children; and afterward two others who also are sound. The youngest, an infant about one year old, was stripped and examined by me two days ago without exhibiting the slightest evidence of disease. The dermatosis is uniform in its appearance, and the three cases before us illustrate perfect types of the affection. There is no symptom of the disease which cannot be seen in other cases. The peculiarity of xeroderma pigmentosum is a complexus of symptoms at an early age, and these symptoms can readily be grouped into four tolerably dis-

tinct categories, although there are authors who add several others. These others I believe to be sequences of the primary lesions.

1. Pigmentation, or freckling, is very distinctly marked, usually mostly on the exposed surfaces of the body, face, hands, forearms, upper chest, and in some instances, as in the case of the child in my arms, over the lower extremities and dorsum of the feet, varying from a light fawn to a deep chocolate color, deepening with years. Sometimes there are distinctly isolated freckles or pigmentations; in other cases there is confluence forming areas without very distinct circumscription.

2. Whitish spots, maculae, which are atrophic in character. These symptoms precede and sometimes follow the freckling. The white spots are usually most conspicuous upon the exposed surfaces of the body, often about the orbits and other portions of the face, but they are also visible in other regions. The maculations are smooth, whitish, slightly wrinkled, atrophic, and in some cases shrink so as to produce cicatricial contracture.

3. Telangiectases, minute blood vessels developing in the skin, which may be hardly visible to you in the light of the evening. In the daylight there is a strong contrast between the freckling or pigmentation and the telangiectases. These vary in size from minute tufts to pinhead sized elevated lesions.

4. The formation in different parts of the body, on the hands, face and elsewhere, of nodes, nodules, or warts as they are sometimes called, practically all of them epitheliomatous; so much so that the disease has been described as a "senilitas praecox." The first patients I saw were examined by me in Paris in 1888, and these distinctly, from the beginning, showed "precocious" epitheliomata of the skin. All the other symptoms of the disease described by authors, in my judgment, are secondary to those I have outlined under the four heads given. They are ulceration, breaking down of the warty growths, crusting, cicatrization following the ulceration, and in some cases the formation of a distinct epithelioma from the cicatrix. Sometimes there is a furfuraceous desquamation of the scalp. The warty lesions in most cases are precisely those which we see in persons of advanced years suffering from epithelioma. This little boy ten days ago had an area of ulceration near the ear, which, if it had been somewhat enlarged upon a photographic plate, would have answered admirably for a picture of the "rodent ulcer" of our English friends, a strictly typical epithelioma; and the epitheliomatosis which is going on in the skin here and there, not only in these cases but in the others I have seen, is one of the most marked features of the disease.

I will say but a few words with reference to the etiology. You will readily understand that a man who dogmatizes about a disease of which there are possibly only 150 or 200 cases in the world is speaking about an affection of which very little is known. The etiology is obscure. A large number of authors lay it down as positive that the lesions are induced in skins which are sensitive to the action of light, pointing as a prime feature in all cases to the fact that the exposed surfaces of the body are first and

chiefly involved, and that other regions of the body are only secondarily implicated. This eldest child has freckles extending down over the posterior aspect of the body toward the sacrum, and from the knee downward. It is held by those who believe that the light directly affects these cases, that the light in children of sensitive skin percolates through the clothing and produces the disease in that way.

The ocular lesions in these cases are keratitis and corneal opacities. You see all these children are blinking in the light. Although our oculists are disposed to believe that the ectropion is the chief cause of the keratitis, inasmuch as epithelioma has sprung from the ocular globe in similar cases, I am inclined to the belief although I would not be understood as dogmatizing on the subject, that the condition recognized upon the skin is to a degree due to the morbid tendency of the conjunctiva and cornea.

We are treating all the epitheliomatous lesions of these little patients with the x-ray and in almost each instance a great improvement has followed. We have done this in the face of the apparent objection to such a therapy that the action of the x-ray is of itself capable of producing pigmentation, telangiectasis, and, in instances, epithelioma.

The prognosis in all cases is grave. A few patients have been seen where the disease seems to have been arrested for six, eight, or more years. Most of them develop at the close of the first year of life. These children exhibited their first symptoms at about that time. The earliest age on record at which the disease has developed is between the third and fifth months. A few cases have occurred in people of 70 and 90 years of age, but we must accept such a report with reserve. The light colored, often reddish tinted hair is a conspicuous feature of many patients.

Symposium on Syphilis.

Syphilis of the Heart and Aorta.—Historical.

R. H. Babcock. Our knowledge of the pathological changes which take place in the heart as a result of syphilis is of comparatively recent date. The first authentic case of the kind was one of gumma and endocardial thickening published by Ricord in 1845. This was followed by a similar one by Lebert 4 years later after which a gap of 8 years ensued and then in 1858 a case was recorded by Virchow. This famous pathologist then pointed out for the first time that sclerotic changes might be produced by luetic infection. It was about this time or a little later that Fournier began to direct attention to syphilitic manifestations as seen in the central nervous system and their great clinical importance. The following 10 or 15 years witnessed a great awakening to the fact that this disease does not spare the nervous and circulatory apparatus as had previously been supposed. Numerous examples of cardiac syphilis were reported by observers on the Continent and in England, L'Honneur, Haldane, Wilks, Hutchinson, Wagner, Scarsensio, Nalty, Lancereaux, Fowler. These cases were the accidental discovery of the dead house, and it was not until late in the seventies that the clinical manifestations of cardiac syphilis began to be recognized and published. Semmola's name figures prom-

inently among such reports, while Huchard, Hallopeau, Sacharjin in particular pointed out the etiological connection between cardiac lues and attacks of angina pectoris. The first elaborate monograph on syphilis of the cardiac structures, however, was from the pen of Lang in 1889 and in 1893 Mracek published another exhaustive paper wherein were collected 100 cases out of the literature, so that as remarked by Runeberg* in his recent excellent contribution to this subject it appears that the actual number of recorded cases had not been so few as was supposed. Since the appearance of these papers clinicians have not left the observation of cases to the pathologists but have been reporting a steadily increasing number of observations until now cardiac syphilis can no longer be said to belong to the great rarities of medicine.

Morbid anatomy. The special tendency of syphilis to attack blood vessels, which was pointed out by Heubner in the case of the brain, is also apparent in the heart, and consequently the most frequent pathological change noted is endarteritis affecting the coronaries. This process is more or less circumscribed and either through cellular infiltration of the intima, or by fibrous thickening of the media and adventitia or by a combination of both it leads to narrowing or occlusion of the lumen of the vessel. The interference with the circulation thus occasioned leads to areas of myomalacia or to fibroid degeneration in the parts supplied by the affected vessel and in the latter event, possibly to cardiac aneurism. There is nothing in such changes peculiar to luetic disease excepting perhaps their tendency to involve limited area and the tendency of the sclerosis to exist independent of degeneration of other arteries, unless it be the aorta. According to Runeberg it is this liability of the sclerotic change to limitation to the heart rather than any peculiarities in the changes themselves, which enables us to recognize their specific origin.

Another manifestation of myocardial syphilis is the occurrence of gumma. It is much more rare than the degenerative process just noted but is so distinctive that its nature can not be mistaken. It was this form of the disease which was first described by Ricord in 1845. The gumma may be single or multiple and may be found in any portion of the myocardium, i. e. ventricle, auricle or septum. It is apt to be associated with fatty or fibrous degeneration and with thickening of the pericardium overlying the tumor. Lastly, the walls of the heart may be hypertrophied or dilated or both, or the organ may not display obvious alteration in size. This is especially the case when the chief or only change is sclerosis of the coronary arteries.

Any or all of the cardiac structures may be the seat of luetic disease, but the liability of the sac and of the endocardium to involvement is very much less than is that of the muscle. Mracek whose monograph on syphilitic pericarditis may be regarded as authority on the subject, states that the epicardium is the layer affected and that the process is essentially

chronic. The changes are therefore a fibrous thickening usually circumscribed and very rarely leading to loose adhesions between the two layers. Total obliteration of the sac is said never to be discovered.

This is owing to the fact that an exudate is exceptional and when this does occur it is fibrinous rather than sero-fibrinous, (Mracek). The changes of the epicardium are always associated with those of the heart-muscle and generally take place in areas overlying gumma or fibrosis of the myocardium.

Involvement of the endocardium is likewise rare and when observed is in connection with changes in the myo or pericardium or with sclerosis or aneurism of the aorta. Acute endocarditis is not occasioned, for lues here as everywhere else shows its tendency to slow sclerotic alteration. The valves most frequently affected are the aortic semilunar which become incompetent either in consequence of the sclerotic process found also in the aorta or secondarily to aneurismal dilatation.

Syphilitic disease of the aorta manifests itself by the same changes as in other parts of the arterial system; viz. an endarteritis characterized by either diffuse or circumscribed infiltration of the intima and media with cells which undergo fatty degeneration and ultimate transformation into cicatricial tissue. This sclerosis differs therefore from sclerosis due to other causes by the absence of atheromatous ulcers and deposits of lime in plaques and granules. The walls of the vessel are weakened by this sclerotic process and are peculiarly liable to aneurismal dilatation. These changes within the aorta may or may not be associated with similar alteration of the coats of the coronary arteries and with the alterations of the myocardium and valves already described.

The likelihood of specific disease to lead to aortic aneurism is so pronounced that the development of the latter in a person under 50 is presumptive evidence of his having had syphilis even in the absence of history to that effect, or of distinctive pathological changes in other organs.

The precise ratio of syphilis to aortic aneurism cannot, however be definitely stated since authors differ in their statistics. The percentages given by Runeberg are: Gerhardt 56, Welch 66, Etienne 69, Malmsten 80, Rosch 82, and Heller 85. Drummond's 100 per cent is probably altogether too high just as M. Schmidt's 29 is altogether too low. The truth probably lies somewhere between these extremes, i. e. about 60 per cent.

Finally, in concluding the pathological anatomy it may be stated that the cardiac manifestations of syphilis are generally in connection with lues of other viscera although such is not necessarily the case. Moreover they belong to the late manifestations of the infection for although derangement of cardiac action has been observed in the fore part of the secondary stage, this is probably functional and attributable to constitutional disturbance rather than to alteration of the cardiac structures.

Symptoms. These are determined by the seat and nature of the pathological changes. Not infrequently they are entirely latent and the

* Die syphilitischen herzaffectioren. Deutsche Medicinische Wochenschrift, Nos. 1 and 2, 1903.

disease is first declared by the sudden death of the patient. Even when cardiac syphilis becomes a clinical entity, its manifestations can not be said to be distinctive. Coronary sclerosis of this origin leads to angina pectoris, but the attacks are only peculiar in that they occur at an earlier age than is the case in coronary obstruction from a different cause, and it is this fact which aids in the diagnosis of the true nature of the primary affection. According to Runeberg there is also apt to be a want of cardiac hypertrophy and of objective evidence of sclerosis of other arteries. Besides anginal paroxysms there may or may not be disordered action of the heart, as shown by the pulse, depending upon the location and extent of myocardial degeneration.

The symptoms most commonly attributed to heart-syphilis are tachycardia and arrhythmia. Semmola lays particular stress upon these and goes so far as to assert that such derangements of cardiac action in the absence of other recognizable cause, as senility, valvular lesion, dilatation etc., may be put down as due to syphilis. Writers also speak of dull precordial pain or distress apart from distinct angina as sometimes observed and in more than one such case which terminated in sudden death post mortem examination disclosed luetic disease. Runeberg also speaks of the discovery in cases of myocardial syphilis of a muffling or tonelessness of the first sound at the apex together with, it may be, the absence of signs of cardiac enlargement.

Valvular disease of luetic origin displays features seen in similar defects from other cause. It is well to bear in mind the predilection of the aortic valve to syphilitic sclerosis and to incompetence whether structural or relative. Syphilitic pericarditis is very likely to be latent and according to Mracek without signs of exudate. It is generally first recognized at the autopsy, although an indefinite pericardial squeak or rub is not impossible.

Syphilitic invasion of the aorta is usually, perhaps only, declared during life by aneurism, and the symptoms of this affection are too well known to require description. From the foregoing it is manifest how true is the remark that syphilis of the cardiac structures possesses no characteristic clinical picture.

Diagnosis. The number of cases of cardiac syphilis in which clinical recognition is possible must always be greatly below that in which diagnosis is either impossible or conjectural. The reason for this lies in the comparative infrequency with which a definite history of luetic infection or of plain signs of some of its late manifestations are combined with objective evidence of cardiac involvement, and yet the increasing number of published reports shows that heart syphilis is possible of diagnosis in many cases which escape clinical recognition as such.

The data warranting a diagnosis, are, (1) a reliable history of chancre 5 to 10 years before which was inadequately treated or, (2) definite objective signs of such infection together with (3) symptoms of cardiac involvement which can not reasonably be attributed to any other etiological factor. Again an in-

ferential diagnosis may be made and an anti-luetic treatment instituted in cases which manifesting cardiac symptoms yet do not furnish either a satisfactory anamnesis or any of the late signs of syphilis, provided no cause for heart disease can be found in the patient's age or in some antecedent infection as rheumatism. On the other hand diagnosis, i. e. an etiological diagnosis must always be problematical in cases combining the history or signs of old lues with some other condition capable of producing cardiac or cardio-vascular disease. In such an event a therapeutic test may be applied. For instance, I have in charge a man of 42 suffering from cardiac dilatation and inadequacy whose history and habits render syphilitic infection years ago not impossible, but on the other hand his immoderate use of whisky and his slightly stiff arteries together with his former compulsion are in themselves sufficient to have caused cardiac inadequacy and chronic myocarditis without syphilis. In my service at Cook County Hospital was a negro of 30 with insufficiency of both mitral and tricuspid valves, a pericardial rub, ringing aortic second tone and stiff radials who admitted syphilis about eight years ago for which he was treated only six weeks and whose congested liver felt rather irregular and nodular and whose postcervical, epitrochlear and inguinal lymphatic glands were palpable. In this case I think the cardiac condition is very suggestive of chronic myocarditis and muscular insufficiency of the valves due to the lues, and yet it is possible that the vascular and renal condition for he has chronic nephritis, may be responsible for the cardiac incompetence. These two cases illustrate the difficulties of diagnosis and the caution that should be exercised.

Angina pectoris of the kind known as (true), occurring in a person, below the age of 45 and without objective evidence of arteriosclerosis of peripheral vessels should always be regarded as suspicious of lues and warrants the diagnostic test of specific treatment. In fact Runeberg says that nine times out of ten such angina is syphilitic.

It should be remembered however that if the individual is a heavy smoker there is a possibility of the angina being due to nicotine poisoning and the effect of withdrawing the tobacco should be ascertained before one commits himself to the diagnosis of coronary sclerosis due to syphilis.

Semmola considers tachycardia and arrhythmia occurring in a person under the age at which chronic myocarditis is likely and without other etiological history, sufficient ground for subjecting the patient to vigorous anti-syphilitic treatment. From the foregoing it is evident that caution is called for in the diagnosis of cardiac syphilis and that on the other hand the possibility of its presence should never be forgotten. Finally when in any suspected case one is still in doubt after a painstaking search for trustworthy data, a therapeutic test may be made and will clear up the nature of the case.

Prognosis. This should be looked upon as doubtful. Energetic anti-luetic treatment may remove all symptoms, but the character of the pathological changes in heart and aorta pro-

duced by syphilis are such as in most cases preclude the possibility of a restoration of former integrity. In aortic aneurism in particular no amount of specific medication avails in the vast majority of instances to cure the disease. Syphilitic angina pectoris may on the contrary be cured or strikingly ameliorated by a vigorous course of mercury and iodides. Semmola is authority for the statement also that disordered heart's action of this origin may be entirely corrected by appropriate treatment. Valvular disease due to sclerotic change of syphilitic origin is not curable by specific medication, but relative insufficiency may be greatly improved if not corrected. Finally, it should always be borne in mind that sudden death is frequent in cases of cardiac syphilis and hence favorable results from treatment must not be too confidently predicted.

Therapy. The nature and details of the specific treatment called for in this class of cases will be given by others far abler than myself far more familiar with its application. I need only say such therapeutics should not be omitted, but when cardiac incompetence is present such medication should also be combined with other measures generally recognized as appropriate to such symptoms, viz.: rest, digitalis, strychnia, nitroglycerin, cathartics, etc., as indicated. Experience teaches that without mercury and iodides such tonic and depleting measures are of doubtful value and in no wise curative, but if no improvement follows the prolonged and energetic use of specific remedies, then reliance must be placed on the so-called heart tonics alone and particularly on such rules for conduct as will conserve cardiac power and protect the organ from injurious strain.

Syphilis Hereditaria Tarda.

Isaac A. Abt: Cases of hereditary syphilis in which symptoms of the disease manifest themselves during the late period of childhood, during the period of puberty, or adult life, are spoken of as syphilis hereditaria tarda. Fournier believes that all syphilitic cases should be included in this class which originate from syphilitic parents, and in whom the disease manifests itself after the third year or during childhood, youth, or adult life, no matter whether the individual showed symptoms of congenital syphilis during infancy or not.

There are two classes of cases. In the first class, the patient has remained in perfect health without any evidence of hereditary syphilis, until an advanced period of childhood or even later when one or more of the symptoms of late hereditary syphilis develop. In the second class, the late symptoms have been preceded by the usual symptoms of congenital syphilis as it occurs in infancy. There is no doubt that cases of the latter class occur commonly enough, and syphilographers are agreed that the disease may remain for a long time latent, and that late manifestations may occur which are characteristic enough as to permit this special designation.

So far as the first variety is concerned, there is considerable discussion as to whether or not it occurs. Fournier, Neumann, Hebra, Sigmund and others believe that these cases occur; while

Kaposi, Baresprung, Lange and others believe that they are not authentic. They say that if this disease be congenital, there must have been infantile manifestations.

It must be conceded that the eruption of congenital lues in infancy may be so slight as to be easily overlooked, and the other early symptoms like coryza, fissures, seborrhea, coffee-colored skin may be trivial. Hence, there may have been a slight infantile manifestation of the disease and it may have been overlooked.

Again, there are authorities who take the extreme view that the late symptoms of congenital syphilis which belong to the first variety, are not congenital in origin at all, but are the tertiary form of the acquired disease. Hensch, for example, takes this view. He says he would not pronounce a case as late hereditary syphilis, without early manifestations, unless he himself had observed the child from birth and found it free from every syphilitic taint during infancy. He would satisfy himself that one or both parents were syphilitic and he would desire to exclude the possibility of the child having acquired the infection. He has never been able to do this in a single case. He concludes that not a few of the cases that have been reported as late hereditary syphilis without infantile manifestations, are in reality cases of acquired syphilis. It is also true that in the late cases which show tertiary manifestations, and who give an unreliable history, it is almost impossible to say whether one has before him a case of congenital or acquired syphilis with tertiary phenomena. But there are well authenticated cases in which the late symptoms were manifestations of a congenital syphilis, in which no early signs were present.

Kassowitz and Hochsinger have taught us that congenital syphilis may remain latent for a long time, and finally present late manifestations which resemble the tertiary symptoms in the adult. They collected 63 cases of hereditary syphilis during the period of infancy. Fifty-two of these were three months old or less. Some of these cases were under observation for four years; 34 were under observation between six and twenty years. Notwithstanding that 34 cases were under continuous treatment, 11, that is, one-third of the number, showed tertiary symptoms between the 7th and 19th years. The late manifestations consisted of gummata in the bones, particularly the tibia and nasal bones, the hard palate; also on the tongue and pharynx. Glandular enlargement was observed as well as retarded mental and physical development.

Age of Occurrence.

The disease may begin in the third year. It increases in frequency from the fourth to the tenth year, and reaches the maximum from the eighth to the tenth, diminishing in frequency from this time. Statistics show that 7 reported cases occurred after the fortieth year. About three-fifths of the cases which have been collected, were females.

Symptoms.

Bone Lesions. In 212 of Fournier's cases, disease of the bone occurred in 82, and in 11 of Hochsinger's, bone lesions occurred four times;

thus these were present in two-fifths of the cases. Bone lesions occur most frequently between the fifth and the twelfth years.

Periostitis is the most common form of bone involvement. It attacks most commonly the tibia in its lower third, over the anterior surface. The forearm, however, or the lower half of the humerus may be involved in the characteristic way. The periostitis manifests itself by the gradual development of a circumscribed thickening of the bone. During the first stage of the process, pain is present. This is usually worse at night, and is commonly thought to be rheumatic in nature. After the process has been established for some time, the periosteum thickens. One finds at this stage that pressure over the bone is as a rule not painful, though there may be areas which are sensitive. The skin over the thickened bone is not reddened. The course of this thickening is chronic, and tends to deformity. It goes on for months or years, the deformity becoming more and more marked. As has already been noted, the anterior portion, or the crest of the tibia is the most frequent seat of the disease. When it is involved, the anterior border curves forward, at least in a certain area, and a deformity results which Fournier believed resembled a saber blade; hence the name, "saber-blade deformity." In some cases the bone is bent inwards at its lower third, resembling somewhat a rachitic curvature. In others, the entire bone is affected so that it is enlarged to nearly twice its normal dimensions.

Besides the hyperplastic form of periostitis which results in the over-production of bone, and deformity, a gummatous form may occur. These gummata are localized swellings of variable size; they are found over the tibia, but may involve also the frontal bone, the sternum, and other bones. At their first appearance, these lesions are very painful. They may remain for years without undergoing any change, or they may disappear even without treatment, leaving an area of excavated bone which becomes adherent to the overlying skin. Most frequently, however, the gummata soften in time, suppurate, and break through the skin giving rise to sinuses which usually remain open and discharge for a long time. These sinuses are usually multiple. As has already been said, they may occur on the tibia; it is not rare, however, to find them involving the cranial bone.

A gummatous osteomyelitis has been observed as a late symptom of hereditary syphilis. It attacks by preference, the epiphyses in the neighborhood of the joints.

The joint affections are not uncommon. They begin with severe pain, with little or no swelling; later on, however, a hydrops is observed. This is usually bilateral. The knee-joint is the most frequent seat, though other joints are not exempt. In other cases the capsule of the joint becomes infiltrated and tense; the swollen joint presents the appearance of a tumor albus. In the syphilitic cases, however, the swelling is almost always bilateral, which is seldom the case in tuberculosis. The concomitant signs of syphilis are generally present and assist further in the differentiation between

tubercular and syphilitic synovitis. The following case has been under my observation and is of interest in this connection.

W. L., is now about 15 years old. His family history is significant. The father was undoubtedly luetic before his marriage. The mother had two miscarriages. These miscarriages were followed by the birth of a still-born baby. In the course of time, five children were born who are all living and apparently in good health. The sixth child, our patient, is the youngest, he was born about fifteen years ago. Shortly after his birth the father died suddenly, of a myocardial and vascular degeneration, aged about 49.

The child seemed normal at birth, no early signs of syphilis were observed. His development, however, was slow. His nutrition was good; he showed no marked evidences of rickets. His temporary teeth were erupted at a late period and remained for a short time, when they decayed and fell out. His permanent teeth were erupted in the due course of time. The upper incisors were grooved on the cutting edge, the enamel was exposed, and by the time he was 14 years old, four had dropped out. The boy's head is massive; its frontal portion is quadrilateral, the parietal eminences are protuberant, the longitudinal suture is slightly depressed. Intellectually, he is backward, though not idiotic.

At about his tenth year, he complained of pain in his left leg. At this time the crest of the tibia became thickened and deformed, sabre-blade shaped, the region of the ankle joint was also observed to be swollen. About a year later he complained of a pain in his knees. Both knees have been swollen for the past four years, slightly fluctuating, and are undoubtedly distended with fluid. His elbow joints are also involved; in the left one there is great limitation of motion. He has never shown any eye symptoms, nor have there been any ear symptoms. The prolonged use of iodides has brought some relief, though the synovitis in knee and elbow joints continues.

Cranial Localizations. Infantile syphilis leaves behind the following deformities: (1) Frontal; Olympian forehead, convex in front, high and large; forehead with lateral bosses; keel-shaped forehead with median boss. (2) Lateral and postero-lateral; parietal bosses, transverse enlargement of the cranium, **natiform cranium** of Parrot; cranium shaped like the buttocks, swollen in the supero-posterior half (occipito-parietal region), with a groove separating the two lateral tuberosities, as the intergluteal fold separates the buttocks. (3) Asymmetry of the cranium. (4) Hydro- and microcephalus.

The Skin.

Fournier has described the skin lesions in detail. They usually appear at about the age of puberty. They consist of subcutaneous nodules, are composed of syphilitic granulation tissue of firm consistency. They vary in size from a pinhead to a pea. Their color is brownish red. The nodes not infrequently break down; the defect in the skin is covered by crusts. These nodules arrange themselves in a characteristic way. They group themselves to form a circle

or a part of a circle, which may vary in size from a silver dollar to the palm of the hand. Sometimes they assume the form of a semi-circle, or a horseshoe. The semi-circular forms frequently from contact with one another, form figures, and often present a wreath-like appearance. These figures locate themselves by preference, on the forearms, the face, or the legs. These nodules frequently break down to form ulcers. The ulcers have rounded, thickened, indurated borders and a base which is depressed and has the appearance of being scooped out. In healing, the ulcer leaves a smooth white scar.

The eruption resembles lupus more than any other skin lesion, but the nodules of syphilis are hard, dark-colored and tend to arrange themselves in such a way as to form figures. In lupus, the nodes are soft and bright red. The most frequent situation is upon the face or upon the upper part of the legs or thighs.

Nose.

The nose is very frequently involved, though for a long time the only symptom indicating a lesion, is a stubborn coryza with much secretion. The discharge is thick and forms crusts, which frequently obstruct the nares. Small gummata form on the mucous membrane of the nose. They remain quiescent for a long time, but are liable to ultimately ulcerate. These ulcers are covered with a dirty-appearing, foul-smelling membrane. The ulcers give rise to the fetid discharge, the so-called "syphilitic ozena."

The anterior nares or the nasal septum may become ulcerated similarly as in an attack of lupus, only that the syphilitic ulceration is less regular; it is, however, much more rapid in its destruction. All the bony structures of the nose may be attacked. The turbinated bones, the vomer and the ethmoid may necrose. In some severe cases the nose may be entirely destroyed in a few weeks. In a majority of the cases with nasal necrosis, the nose presents more or less deformity of the saddle type.

Mouth and Pharynx. In a similar way, gummatous inflammations of the mucous membranes of the gums, pharynx and palate lead to necrosis and perforation.

Larynx. In a few of the reported cases, laryngeal involvement has been noted. Deep seated infiltration and ulceration have given rise to symptoms of laryngeal stenosis during life. If the ulcers heal, scar tissue results, and disturbances of the laryngeal function ensue.

Lymph Nodes. While the lymph nodes are not usually involved in the early manifestations of congenital syphilis, they occur quite commonly as a late manifestation. They enlarge to a certain size and then remain enlarged for years. They do not tend to become painful, and are found most frequently in the neck and below the inferior maxilla. The axillary and inguinal glands are sometimes involved. Enlargement of the mediastinal and mesenteric glands has been observed. The cuboidal glands are sometimes enlarged.

Hutchinson's Triad.

Three symptoms, which are particularly characteristic for congenital syphilis, were

first described by Hutchinson; hence the name. The symptoms are (a) interstitial keratitis; (b) labyrinthine, or central deafness; (c) deformity of the upper incisor teeth.

Teeth.

The temporary teeth show no signs which are characteristic for syphilis; they tend to decay early, especially the upper central incisors. In syphilitic infants the formation of gum boils is occasionally observed, with subsequent extrusion of the crowns of the teeth from the abscess sacs. The changes which are noted in the teeth occur in the permanent set, and are manifestations of late hereditary syphilis.

The Deformities of the Teeth. The deformity which Hutchinson has described as characteristic for the diagnosis of late hereditary syphilis, occurs exclusively in the two upper central and permanent incisors. These teeth are distinguished by the fact that they have been both retarded in their development, that they are smaller than the other incisors, and also that they tend to converge. They assume a screw-driver shape, and the free, cutting edge shows a central elliptical concavity. Sometimes some structural changes are noted on the lower incisor teeth. At other times too, the canines have been supposed to undergo these changes. The enamel is generally deficient in the center of the notch. It is not evidence that congenital syphilis is not present because the teeth do not show the atypical changes described by Hutchinson.

Interstitial Keratitis is probably the most frequent of Hutchinson's symptoms. It usually occurs between the ages of six and fifteen, but is sometimes seen as early as two or three years. One eye is usually attacked and the other follows shortly afterwards, a few weeks, rarely a year or two. Clouds of opacity of varying density appear in the cornea, and gradually coalesce, until the whole is like ground glass. The episcleral vessels are injected, and a vascular fringe may invade the cornea, forming the so-called salmon patch. Although the sight may be temporarily lost, the usual tendency is to recovery and complete clearing of the cornea. Fournier denied that all cases are syphilitic, but thinks some are due to malnutrition. Iritis is not an uncommon complication.

Disseminated choroiditis may be present in late congenital syphilis; taken together with the other symptoms, it aids in establishing a diagnosis; if found alone, it is of doubtful value.

Labyrinthine, or Central Deafness. Deafness develops during the period of childhood, at the time of puberty, even later. It usually begins with the occurrence of noises. These are usually very annoying. Sometimes too, attacks of vertigo occur. At this period, the child complains of hearing poorly with one ear. This condition increases in severity more and more until in the course of two or three months the child is totally deaf in one ear. After a shorter or longer period, the same state of affairs occurs in the other ear, with the same ultimate results. In these cases the middle ear remains intact, and the evidence is in favor of the fact that the lesion is a central one. The deaf-

is complete, and does not improve under specific treatment.

In addition to what has been said, it may be added that an otitis media purulenta sometimes occurs. According to Fournier, middle ear disease which is due to syphilis is ushered in without any pain. This is no more true of syphilis, however, than it is of tuberculosis.

Fournier reports the following typical cases in which Hutchinson's triad of symptoms were well marked. I cite it in detail.

M. X., aged 30, consulted Fournier on account of some lesions on the penis of three weeks' standing. He was astonished at their appearance. On examining the lesions, F. saw at once that they were gummatous ulcerations. The patient denied absolutely having had any venereal disease whatever. Fournier then examined his body, and began to suspect hereditary syphilis, on account of—after long and patient investigation—discovering the three following signs: Deafness, bilateral. The patient was hard of hearing, and had been so since childhood, yet he thought there had been no discharge from the ears. Dr. Hermet examined his ears and reported as follows: On the right a watch is only heard at four inches. On this side the tympanum is deformed, thickened, with fibrous bands over its surface. There were no perforations, but linear perforations had evidently been present at some previous time and cicatrized. Ossicles apparently semi-ankylosed. On the left a watch can be heard only in contact. There is a perforation of the tympanum at the handle of the malleus.

2. Keratitis. About the age of fourteen, the patient had double keratitis. This was severe and persistent. There was nearly complete blindness for several months. At present there are no appreciable traces left.

3. Bone and skin lesions. In childhood one knee was severely affected, as shown by marked deformity, with cicatrized bands, slight shortening of the limb, limited movement and pronounced limping. The neighboring skin was the seat of numerous cicatrices, some small, others large, evidently the sequelae of peri-articular abscesses or cutaneous ulcerations, probably of specific origin.

The next day his family physician who had treated him in infancy wrote Fournier that the mother, while pregnant, had been infected with syphilis by the father, and that the patient had various syphilitic phenomena soon after birth. When two years old his left knee had a chronic inflammation, which had only been cured after a long course of potassium iodide. Finally, his wet nurse became infected.

Testicles.

The following changes are observed in the testicles: (a) Sclerotic atrophy following infantile sarcocele; smallness (pigeon's egg, hazel-nut); hardness: fibroid, board-like, cartilaginous; modifications in form; irregularities, nodosities, tuberosities. (b) Infantile testicle; testes not deformed, not hard, small rudimentary.

The Kidneys.

Recent researches, particularly the studies of other, would seem to indicate that nephritis

occurs more commonly in the late congenital syphilis than had been previously supposed.

The Liver and Spleen.

Chronic enlargement of these organs has been repeatedly observed. It begins without pain and without disturbance of function. The patients with these lesions present a cachectic appearance, and this cachexia is usually associated with symptoms occurring in late hereditary syphilis. The enlarged organs are usually hard to the touch. In the liver, nodules of various sizes or ridges may be felt on palpation. Those changes are usually observed in older children, seldom before the fifth year, usually most often at the age of puberty.

The condition may continue unchanged for years, or it may lead to ascites and icterus, and in this way terminate fatally.

Nervous System.

Cases of organic disease of the nervous system in late hereditary syphilis are multiplying in the literature. Persistent headache, with nocturnal exacerbations, have been described by Fournier. Cases of meningitis and endarteritis, as well as infantile tabes and progressive paralysis are being observed and reported with increasing frequency.

Cerebral gummata are exceedingly uncommon. Of 299 cases of cerebral tumors under nineteen years of age, collected by M. A. Starr, there was but one case, and that in a youth of eighteen.

Epilepsy and idiocy as manifestations of late congenital syphilis have been described, but there is great difference of opinion about this point. There are however, a few well authenticated cases of epilepsy and idiocy resulting from late hereditary syphilis.

Many of the pronounced cases present a condition of late syphilis infantilism. Those who are in their twentieth or twenty-fifth year make the impression of children who are ten or twelve. They are dwarfish; bones and muscles are poorly developed. The genitalia are small and undeveloped, and there is absence of pubic hair. Puberty occurs late; menstruation and growth of the breasts is delayed; the uterus and its appendages are small.

Anemia is usually present, and the skin has a sallow appearance.

Mental deficiency, more or less marked, is present in most of the cases.

The paper by Dr. Patrick on *Syphilis of the Nervous System* has not been furnished.

Treatment of the Late Manifestations of Syphilis.

James Nevins Hyde: Mr. President and Gentlemen of the Society. In the brief time which within these limits it is proper to devote to the subject under consideration, it is quite impossible to do justice to the part assigned to me. One might well hesitate to attempt the task, in view of the enormous mass of literature which has been contributed to the theme by some of the clearest thinkers and most carefully trained observers. Further, it will, I think, be conceded that on most of the points to which reference might here properly be made, the men of our profession are in general agreement. I shall

therefore merely attempt to enunciate a few propositions which, whether accepted or not, may serve to test our doctrines respecting the important subject of the treatment of what has been termed the "late manifestations of syphilis."

The word "late" is employed by English speaking people in several senses. In a first, it is used to designate an event or action occurring after a usual or proper time. In this most common sense a "late arrival" is one which is tardy—one occurring at a date or hour after that anticipated. In a second sense, less commonly intended, "lateness" refers to an event which occurs toward the end or close of a period or career. There are other senses in which the word is employed that need not here be discussed.

In accordance with neither of the two chief usages referred to, can any of the phenomena of syphilis be strictly catalogued as "late." The dominance of the mind by the time-schedule of French authors in their conception of the disease is overcome with difficulty. In syphilis there is, strictly speaking, no early and no late; no precocity, no tardiness. In its career, though that which is "early" is rarely late, that which is "late" is often early. The gravest sequences of syphilis may occur within a few weeks or months after the date of infection. The problem is not one of those where time is of the essence. The problem is one in which the chief element studied by the careful observer concerns the character of the soil on which the seed has been implanted, or, in the language of the laboratory, the culture-medium on which the germ is inoculated. From the pathological point of view, the element of time is of minor importance. It is admitted, however, that months or years may elapse before these grave sequences develop. Whether, however, speedily or after a longer or shorter interval declared, what are the manifestations? These should be at least named before the question of treatment arises.

Loosely speaking, they may be separated into two tolerably distinct categories: first, the morbid symptoms for which gummatous products are responsible, including the lesions of the nervous centers, the bones, the viscera, the testes, the uterus and its appendages, the skin, the eyes and the ears. Second, a somewhat indefinitely defined group of manifestations to which Fournier has given the name "parasyphilitic affections." These for the most part are not recognized as belonging strictly to what may be termed gummatous syphilis. Aside from one cutaneous affection, namely, the pigmentary syphiloderm, it is sought to include in this special list: for acquired syphilis: hystero-neurasthenia in its multifiform manifestations, tabes, general paralysis, a special form of epilepsy, and another of muscular atrophy. Of the eight items catalogued, it will be perceived that no less than six are related to affections of the nervous system. In hereditary syphilis, the list is larger, including a series of dystrophic disorders: malformations, dental and other; of arrests of mental and physical development: infantilism; cachexia; rickets, hydrocephalus; and the forms of epilepsy, meningitis, tabes, and general paralysis recognized in juvenile cases.

The necessity of reference to these two groups is emphasized by the striking fact that

the chief basis for the establishment of the "parasyphilitic" class by the distinguished French syphilographer, is their assumed failure of amenability to antisiphilitic treatment. It is a basis which it seems to me cannot be successfully established. Viewing comprehensively these two groups of manifestations as sequences of syphilis, the following propositions may be enunciated with respect to their treatment:

1. The best clinicians of today direct their treatment less to the disease than to the patient. Syphilis here aligns itself with almost all the other general infections. There is no fixed and accepted method of treatment for any of the symptoms of variola, tuberculosis, or pernicious anaemia. The best treatment of the grave sequences of syphilitic infection is that specially indicated by the conditions recognized in each individual case, fully realizing that while the categories of scientific symptoms have been faithfully compiled, no two cases are exactly similar.

2. There are patients in whom treatment is either of little value or altogether valueless. It is singularly strange that it should ever be needful to direct attention to this point, a point from which after even a superficial examination of the subject, there should not be dissent. Persons are invaded by the toxins of yellow fever, plague, and cholera, in whose cases human skill is without avail. Syphilis in its extreme phases stands with the other grave devastations of the human race. There are cases in all lists where, usually as a consequence of the physical condition of the sufferer, occasionally as the result of the brevity of time in which it is possible to exert skillful interference, the end is determined at the outset. In syphilis, unlike many other disorders, the issue is unfortunately, not always fatal to life. Syphilis is rarely a disease that kills. Its worst issues are ruin, damage to all that makes the body a comfortable tenement and to much that makes life worth living, yet the wreckage of the body often continues to drift along unsubmerged.

3. Prophylaxis is the most potent of all the methods by which grave complications of syphilis may be averted. Persistent, skillful, and at times energetic medical treatment of the disease from the outset, is of high value; it is set down by most European and many American physicians as of the highest value. The drug treatment of the disease, however, is of secondary importance compared with the best hygienic management, including an enforcement of the methods of living which influence the physical condition of the patient in the direction of the largest measure of health. Careful study of scores of cases reveals in strong colors the startling fact, that a large number of sufferers from these manifestations of syphilis have brought the ruin upon themselves. This is so vast a subject that here it can barely be mentioned. Dissolute habits of living, excesses in the use of alcohol, tobacco, and the narcotico-stimulants, incessant brain-strain of the modern business man competing for the prizes of commercial supremacy, despondency, and the influx of other disorders which might have been set aside—these are tremendous factors in the pushing of lues toward its unhappy consequences. It

is significant that while women suffer from the symptoms here considered, from many of these complications, women are conspicuously exempt. The corollary is so obvious as to require no comment. The antecedent histories of women who actually do become victims of these grave manifestations of the disease, sharing the fate of their male companions, are singularly like those of the men who suffer in the same way.

4. The medicamentous treatment of the gummatous manifestations of syphilis still includes, as remedies of the highest value, the salts of mercury and of iodine, and iodine itself. In this day, however, the old dictum that mercury was chiefly available in the management of the superficial and symmetrical symptoms, and that iodine and its compounds were to be employed chiefly in gummatous and so-called "late" manifestations of the disease, has been practically relegated to the past. Mercury is of the highest value, not only in the one class but in the other. The relative advantages and disadvantages of the methods of its administration by inunction, fumigation, and deep injection, need not occupy space here, as these all are fully considered in the accepted works devoted to the subject. The neurologist has long since learned that when the iodine salts, pushed in the American method from the smaller to the largest doses in ample dilution, have failed, the patient has often been recalled from a semi-unconscious stupor due to an obliterating endarteritis or to meningeal thickening, by the administration of calomel in one-tenth of a grain and even one grain doses every hour until the desired result was obtained. As for the newer combinations of these valuable remedies, some have undoubted value; none has yet completely displaced the older, in the presence of an emergency. The "mixed" method of treatment may be regarded as an ingenious device of the chemist rather than as an energetic means in the hands of the skilled physician. The tannate of mercury is contesting a first place with the iodine and chlorides; iodopin, of undoubted value, is easily first before iodo-nucleoid and the lately devised soluble solutions of iodine; as well as hydriodic acid.

The management of the group of so-called "parasyphilitic" affections is detailed in most of the standard works on affections of the nervous system. Often, but not always, the compounds of mercury and of iodines are here found inefficient, but not more so than in many cases of unquestioned gummatous disease where persistent dilatation of one pupil, extensive involvement of the testis, gigantic ulceration of the skin, and even osteo-periostitis, refuse to yield to the same remedies. For the so-called parasyphilitic manifestations, the electrician, the masseur, and the physician who is competent to direct the patient in the matter of diet, exercise, and rest have all had their triumphs. Frenkel's treatment of tabetic ataxia based largely on the hypotonic condition of the muscles, and finding an explanation of its results in the theory that the disease is less of central origin than due to impaired sensibility at the periphery, appeals strongly to those who have vainly tried the older measures aimed at securing relief.

5. Lastly, attention should be directed to a class of cases, the treatment of which is widely

different from that suggested above. Twenty years ago the laity scarcely knew the meaning of the word locomotor ataxia and were unfamiliar with its conspicuous symptoms. All this is now changed. The relative frequency of the disease, and its occurrence in persons of high official position or widely extended acquaintance, have to a degree educated the public in recognizing the more prominent symptoms of the group of disorders of which tabes may be regarded as an illustration. Their relation to syphilis is appreciated by well informed persons outside the pale of the profession. The advertiser in the daily press has taken advantage of what is thus more or less generally known to awaken a vague dread of these results in the mind of the average reader of the newspapers. As a consequence, a class of patients is brought to the attention of the expert, who simulate the phenomena of nervous syphilis with singular faithfulness. They are not of the old fashioned "syphilophobia" class, nor yet of the number of those whose imaginations are wholly responsible for their conditions. They are the victims of a past or present syphilis; and the deterioration of the tone of the system, short of inducing a distinct cachexia, has resulted in the production of symptoms largely due to impaired innervation which closely resemble the features of grave syphilis of the nervous system. The utmost skill of the expert is required in the unraveling of the truth in these cases; and, aside from the restorative measures demanded, the treatment involves a moral management which only the physician who is scientifically trained and who is sure of his facts, can duly enforce.

Discussion on the papers of Drs. Babcock, Abt, Patrick and Hyde.

G. W. Boot: In connection with Dr. Babcock's paper, I have a specimen of syphilis of the heart to present. The patient was a male infant, aged seven months, weighed about five pounds, but said to weigh ten pounds at birth. The child had coryza before death. Mother apparently healthy, and father declined a private interview. This child presented some signs of hereditary syphilis. The child showed radiating scars at the upper lip and at the angles of the mouth. There were various scars in other parts of the body. There were three small abscesses, one on the right shoulder, and two on the right forearm. The child was emaciated. Subcutaneous fat absent. Lower half of the upper lobe of the lung consolidated. In the right lung there were small areas of consolidation. There was considerable enlargement of the mesenteric glands, otherwise the post-mortem examination was negative. The specimen shows ulceration of the leaflets of the tricuspid valve, and just below this a perforation through the interventricular septum. In addition, there is a patent foramen ovale.

L. Harrison Mettler: There are one or two points I wish Dr. Patrick had brought out more clearly in speaking of the symptomatology of syphilis of the nervous system. He doubtless would have done so if time had permitted. How can we distinguish between those cases that are amenable to syphilitic treatment, and those in which we feel sure of our diagnosis, and yet find

that we get no response to antisyphilitic treatment? These two classes of cases give us much trouble in connection with syphilis of the central nervous system. I am not referring now of course, to the class of cases touched upon by Dr. Hyde, the true syphilitic, and the so-called parasymphilitic cases. Neurologists do not regard the latter as syphilitic, but as the remains of syphilis—dementia paralytica, tabes, etc. There is a class of cases however, that are actively syphilitic. In eliciting the history of such a case, we find manifestations of headache, insomnia, vertigo, choroiditis, or neuro-retinitis; and even though one uses vigorously the iodides, alternating with inunctions of mercury he does not get the results he expects. I have had several of these cases that have proved very puzzling. I have asked some of my professional friends about them, and they have told me that they are the cases in which histopathological changes have so taken place that they are beyond the reach of anti-syphilitic medication. I reported one such case at the last meeting of the Illinois State Medical Society. The man had intense pain passing around the head like a band. He had such marked photophobia that he sat before a number of gentlemen in my clinic with his hands over his eyes. He had peculiar sensations all about the body like a true paresthesia. He was a railroad conductor and admitted the possibility of having contracted syphilis. His first wife had aborted three times. His second wife's first child was stillborn. I do not know what the result of the second will be, as the woman has only been pregnant two or three months. On account of this trouble in the head and eyes he was treated for two years with large quantities of castor oil, without results, by one of the most careful ophthalmologists in this city. Two other gentlemen who saw the case with me differed diametrically in their opinions. It was thought by still another ophthalmologist that the man had had syphilitic choroiditis. I put him on the iodines, and gradually carried the dose up until he was able to tolerate as much as one thousand grains a day. Inunctions of mercury were also used. For a time the photophobia and pain disappeared, and he resumed work. There was no suggestion of hysteria. The prevailing diagnosis among the ophthalmologists was that the trouble was syphilitic; yet the man relapsed on this treatment, and we were obliged to admit that he was practically no better. I do not know what has become of the case. It was one of the most remarkable cases of that character that I have ever seen. I have seen several others, but not so pronounced as this one where I felt sure that the diagnosis was syphilis, and yet in whom I got absolutely no response from the use of the iodides or mercury.

It would be a splendid thing for us if we could tell by symptoms in some way in what cases it is worth while to continue the iodide treatment, and in what cases this treatment will prove useless.

I am not always clear as to what should be done in these cases. I feel however that in cases where we have slight or mild secondary symptoms of syphilis with the involvement of the nervous system that the iodides help us. In cases with intense headache, and where the ocular

trouble is distinct, the iodides are always borne well, and in such I have obtained excellent results by continuing the treatment. If I give a patient fifty, sixty or a hundred grains of iodide a day and then jump to three hundred grains a day and find that I do not overcome the symptoms, I begin to think that I have a case in which well-known histo-pathological changes have taken place. It would be of great value in all cases of syphilis of the central nervous system to know symptomatically exactly in what cases we may expect the iodides to be of benefit, and in what cases we may expect no results whatever.

Henry G. Anthony: In the discussion of Dr. Babcock's paper, I desire to call attention to the fact that a few recent writers are asserting that acute malignant endocarditis sometimes develops in the early history of syphilis. One of these writers has seen several such cases. He has gone over the literature at his command in an effort to find similar cases reported, and among other authorities he has consulted Dr. Babcock's recent work, which he says conveys no information whatsoever on the subject. He has therefore discovered a new phase of cardiac syphilis.

It is my opinion that these cases are not cases of syphilitic infection, but they are due to gonorrheal infection accompanying the syphilitic infection. My opinion is strengthened by the fact that none of these writers mention the gonococcus as a possible cause of such acute malignant endocarditis. There is no statement made as to whether the patient has or has not a discharge. No statement is made in regard to a search for gonorrheal shreds in the urine, nor is there any statement made as to whether the patient had symptoms which might be due to gonorrheal rheumatism. In a word, it is plain that the author did not have the gonococcus in mind.

I have recently had called to my attention the following case: A physician of my acquaintance told me a few weeks ago that he had in his practice a case which he thought would be interesting to me. A patient came to him with a chancre, and following it the secondary eruption of syphilis appeared. While the secondary eruption was still present, suddenly acute endocarditis developed. It was accompanied by symptoms of sepsis; coated tongue; elevation of temperature; night sweats, and rapid pulse. The physician wanted to know in regard to the literature on that subject. I asked him if the patient had a urethral discharge. He replied yes, when he first came in, but he paid little attention to it and he did not know whether he had a urethral discharge or not at the time he was conversing with me.

On inquiring in regard to gonorrheal rheumatism, it was ascertained that the patient at that time had a swollen joint. I told the physician that he should be careful to look for the gonococcus; and, furthermore, to give a very guarded prognosis. Two days later, when I saw him and asked him about the patient, he said the patient died a few hours after our conversation.

Another point in connection with Dr. Babcock's paper is this, a condition which I do not

think the average practitioner will diagnose unless his attention has been directed to it, and that is, a gumma developing in the wall of a blood vessel. A patient who suddenly presents edema of an extremity, an arm, or forearm, will manifest no severe symptoms. His general condition will be good. But on examining the patient, in the axillary space or in some other location we will find a tumor varying in size in different cases. In the central portion of the tumor there is fluctuation. Tracing it to its origin, you can distinctly feel that it is attached to a vein, extending downward there is thrombosis of the vein. Of course, in the manipulation of such a tumor one should be careful not to detach the thrombus. In these cases there is no fever, no symptoms of phlegmonous inflammation, and the patient does not suffer pain. When such patients come under observation they should be kept quiet, because their movements will easily detach a coagulum and produce embolus. Furthermore, they should be kept in bed long after syphilitic treatment has accomplished its object.

One other point in connection with Dr. Babcock's paper as to aneurysm. Efforts have been made to ascertain if it were possible to diagnose aneurysm due to syphilis from aneurysm which is not due to that disease. So far as the literature of that subject is familiar to me, in addition to the point of age, which Dr. Babcock brought out, it has been said that multiple aneurysms are usually of syphilitic origin. Furthermore, a syphilitic aneurysm is far more apt to develop on the posterior wall of a blood vessel than is an aneurysm due to other causes.

Of how much importance these points are, is a matter of question, but they should at least be studied.

In regard to syphilis hereditaria tarda, the impression is often conveyed that the late development of syphilis is characteristic of that form of disease and not of other forms. Such is not the case. Every form of syphilis is apt to show a long period of latency, and syphilis hereditaria tarda does not vary from acquired syphilis or from any other form in lateness, but in the character of the lesions present, in which dermatologists have endeavored to make a distinction. Fournier reported a case of acquired syphilis in a patient in whom a period of forty years elapsed from the first manifestations of the disease until the subsequent symptoms were developed. Every practitioner has undoubtedly seen from ten to twenty years elapse without having his attention called to the disease. There is no reason why congenital syphilis should not at times follow the general law of syphilis and show a long period of latency.

Cases of syphilis hereditaria tarda may be divided into three classes. First, those cases in which the lesion present in every way resembles the lesion of ordinary acquired syphilis. Second, those in which some of the lesions of ordinary acquired syphilis are present and the other lesions are special. Third, those cases in which all of the symptoms are of a special variety, and these cannot be distinguished from scrofula, according to Kaposi. As I have understood Kaposi, he does not mean to say that a long period of latency cannot occur in congenital

syphilis, but what he says is this: We cannot accept as cases of congenital syphilis those various cases reported where the evidence is so meagre, and which were not absolutely characteristic of the disease, such as Hutchinson's teeth, and various symptoms of that kind.

In this connection I desire to call attention to a case that I have under observation at the present time. Twenty years ago a man acquired syphilis. He married while he had the roseola present, and immediately infected his wife. A child was born three years after this infection. Eleven years ago I examined the family, the father had unmistakable evidences of syphilis. The mother presented the ordinary symptoms of the disease; but the child, after being examined repeatedly, shows absolutely no evidence of the disease. Within the last three weeks the mother brought her daughter to me again, she is now 17 years old, and I find she presents a circinate ulcerating tubercular syphilide, situated on the anterior surface of the chest. There is nothing in the history of the case which would in any way suggest possible extragenital infection. There is nothing in the case which would suggest genital infection. Born of a syphilitic mother, who was known to be syphilitic at the time of conception, there is every reason to suppose that it is a case of hereditary syphilis in which no appreciable evidence of the disease was present up to the seventeenth year of her life.

Julius Grinker: I wish to report a case in connection with the subject of early brain syphilis. A young man contracted the initial chancre two months previously, and barely had a slight roseola when he developed a transient paralysis of the third nerve. The facial was also involved, but yielded to the administration of potassium iodide and mercurial inunctions after two to three weeks treatment. What was it? Tertiary syphilis; otherwise I do not think the treatment would have been successful.

A fine point that Dr. Patrick also brought out was the explanation why the treatment of syphilis of the nervous system is inefficient in a number of cases; that is, where endarteritis or periarteritis has gone on to the extent of obliterating the vessel, and then causing softening of that portion of the brain which is dependent upon this vessel for its life. In those cases we get a softening of the brain which is the same as softening from any other cause, such as senile arteritis, thrombosis, embolism, etc. When nerve tissue is completely destroyed, no medicines can regenerate it. In those cases also where a scar is left as the result of syphilitic disease, it is a question how to remove the scar. The scar is there and is going to be there, and here, too, we are unsuccessful in removing all of the symptoms.

In regard to the somnolence mentioned by Dr. Patrick, I recall an interesting case of cerebral syphilis in which the opposite of stupor, extreme agitation, was taking place. The patient was simply wild. He said later that he had had an irresistible desire to smash everybody and everything; and that was the ushering in symptom of an incomplete syphilitic hemiplegia, which yielded entirely to potassium iodide and mercury in massive doses. We are

apt to have all kinds of psychical disturbances in syphilis previous to the onset of paralysis, transient or permanent. Or, we may have psychical manifestations without any motor disturbances at all.

These psychical symptoms as well as the psychoses of syphilis and para-syphilis are probably produced by disease affecting the convexity rather than the base of the brain, while the different kinds of syphilitic paralyses are mostly caused by disease at the base and by interference with the blood supply of areas containing motor neurones.

Sanger Brown: I wish to express my gratitude to Dr. Hyde for the masterly way in which he has classified the different kinds of syphilis and for the broad lines of treatment laid down by him. I was gratified to learn from a man of his broad experience that there were cases of undoubted syphilis which were not amenable to the usual treatment, but which is so successful in many cases. Dr. Mettler has mentioned a case of that kind, and it was reassuring to me to know that I had not been treating some of my cases of cerebral syphilis improperly.

L. Blake Baldwin: The thought struck me during the reading of the papers and in listening to the discussion that we would not see so many cases of late syphilis if more chancres were recognized by the general practitioner. Most of the bad cases I have seen in my practice were those that have been diagnosed by general practitioners as chancroid.

Dr. Babcock (closing the discussion on his part): I desire to add a word or two in expressing my pleasure at hearing what Dr. Anthony had to say concerning acute endocarditis caused by syphilis. It is so contrary to all our notions of the manner in which syphilis produces its effect, that it is, to my mind, inconceivable, and recently, when in the South, I conversed with a writer on the subject, and became satisfied from inquiry that the cases so conceived by him and others, if syphilitic, have not been investigated as they should have been, and in my own mind I am satisfied that they were in all probability due to the gonococcus. They occur, and this is presumptive evidence, in the negro, in whom we know chronic gonorrhea is not at all uncommon.

Dr. Abt (closing the discussion on his part): It is to be regretted as Dr. Shalek has already said that cases of late hereditary syphilis with distinct symptoms of infantile syphilis are included in the same class as those cases where no infantile symptoms occurred. Syphilis hereditaria tarda should preferably be used to designate the latter class.

Nevertheless the classification that has been handed down to us from Fournier includes both variety of cases. I have adhered to his classification in my description of the disease.

Dr. Hyde (closing the discussion): I think one of the most valuable experiences I have ever had was on a Sunday morning in the year 1900, when Professor Fournier took us into his wards and showed us a group of cases of late inherited syphilis in young men and young

women. He stated at that time that almost all of the patients shown, had one symptom which has not been referred to this evening, and that is incontinence of urine. He found this an exceedingly common symptom in the late forms of inherited syphilis.

Dr. Patrick (closing the discussion on his part): I do not care to say anything more in regard to my own phase of the subject, but I would like to supplement Dr. Hyde's paper with a few words, as the result of my own personal experience. It happened to me a few times to have seen cases of cerebral syphilis or spinal cord syphilis which had developed during the course of treatment, and what I get up for is to deliberately, forcibly and emphatically damn the ordinary way of treating syphilis by giving one or two, three or four, little pink pills of protiodide of mercury. This treatment may be all right for many cases of syphilis, but for some cases of the disease it is inappropriate. As Dr. Hyde has said, there are some cases of syphilis that are absolutely not amenable to mercury and iodides. There are still others that are hardly amenable, and no one can tell in the beginning of treatment which are going to be the refractory cases and those which are not. It is a matter of experience. We have got to find out. While one is finding this out, the patient is liable to have severe syphilis. When I saw a promising young fellow lying on a bed absolutely and totally paraplegic, with involvement of the sphincters of the rectum and bladder, from spinal cord syphilis which had developed while he was being treated for syphilis, it made me think a good while. This is only one example.

I would like to repeat what I have said on previous occasions, that he who treats syphilis should treat it hard, and very hard. My own opinion is that in the vast majority of cases we cannot treat syphilis hard by giving little pills by the mouth, because they upset the stomach and bowels before the patient is mercurialized. Next to the stomach and bowels are the mouth symptoms. These are sometimes bad. They can be abolished or obviated by proper care of the mouth. I venture to say, from cases I have seen in consultation, that not one patient in ten has the mouth properly cared for. They are furnished with a little chloride of potash water and told to rinse the mouth out. What is needed is a good strong antiseptic, with which the patient can scour his teeth and gums. Massage of the gums should be resorted to. It has occurred to me time and again, when I have recommended inunctions of mercury to hear the doctor say, "How much would you give?" I say, give a dram twice a day, and rub it in well. The doctor would say, "Great Heavens, it will salivate the patient." It does not salivate the patient if the mouth is properly cared for. We know so little about syphilis, how it is cured, and how much mercury it takes to kill it, and so little of how much mercury is taken up by the system, and how much more one person will take than another, whether the mercury be given by injections or in the form of inunctions, that God only knows what is taken up in the circulation except by the effect, and the effect must not be on the mouth, nor on the bowel, but on the syphilis, and, therefore, we should endeavor to minimize

or remove the possibility of the effect being spent on the mouth or on the intestinal tract.

1. Late Superficial Residua of Syphilis Such as Aid in the Diagnosis, W. L. Baum. The paper by Dr. Baum has not been received.

4. Syphilis of the Nervous System, H. T. Patrick. The paper by Dr. Patrick has not been received.

Council Meeting.

At the meeting of the Council, held Oct. 12, 1903, W. L. Baum, F. S. Johnson and D. J. Doherty were elected Trustees of the Chicago Medical Society.

The following delegates and alternates were elected for two years to represent the Society at the meeting of the Illinois State Medical Society: Delegates—W. L. Ballenger, M. Herzog, E. Ochsenner, J. M. Dodson, A. C. Cotton, W. R. Livingston, J. C. Webster. Alternates—E. McEwen, L. L. Gregory, G. P. Marquis, M. H. Luken, J. S. Hunt, C. F. Swan, C. Davison.

Wm. Harsha, J. B. Herrick and A. Gehrman were elected the Membership Committee, and W. A. Evans, H. N. Moyer and C. S. Bacon the Medicolegal Committee.

Proposed Change of By-Laws.

The following recommendations for a change in the by-law relating to the time limit of papers read before the Society was presented by F. S. Churchill, and will be considered at the meeting of the Council, November 11, 1903:

"The time limit of papers shall be 20 minutes, except as provided for as follows:

"An author wishing more time for his paper shall send said paper to the President of the Society at least one week before the stated meeting. The President shall submit the paper, without the author's name, to a secret committee of three members of the Society, named by the President, who shall report to the President the length of time to be allowed the reader."

It not infrequently happens that valuable papers are cut short or skimmed through with important omissions, to the disappointment of the audience and much to the annoyance of the reader, who may have spent much valuable time and thought in preparation of his paper. My own personal opinion is that few papers worth hearing can be read in twenty minutes, except clinical cases. I think that the above change in the by-law would conduce to more carefully prepared and more exhaustive papers, and it is, of course, the object of the Society to encourage a high standard of work on the part of the members.

Exhibition of Pathologic Specimens.

President Preble is endeavoring to have more pathological specimens presented to the Society. In a recent bulletin he says:

The work of the Chicago Medical Society for the coming year may be divided into classes, the scientific work and the work of organization. There is a difference of opinion as to the relative importance of these two kinds of work, but there can be no difference as to the fact that both are important and that neither should be

sacrificed to the other. It is also manifest that while the bulk of the work of organization must be done by the members themselves, the Society should have the benefit of the best work of all its members. There should be no one of us who finds fault with the character of the work done, and yet does nothing himself. He alone has the right to criticize who does the best he can. The scientific programs ought not to be a burden on the officers, and the officers look confidently to the members for hearty assistance and support.

It seems desirable that a certain amount of time should be spent on the study of pathologic specimens, both gross and microscopic, and all men who are making autopsies, and particularly those who are making the autopsies at the County Hospital, are invited and urged to bring before the Society specimens of all sorts. It should be remembered that this body is one of practitioners with all sorts of interests, so that specimens of all kinds of conditions will be of interest. It should further be remembered that the great majority of the members have only too infrequent opportunities to see pathologic specimens, and that, therefore, a specimen which would have but an everyday interest to a pathologist will have great interest to a practitioner. Let us see the daily run of specimens as well as the unusual. There should be sufficient pathologic material in this country to have a fifteen or twenty minute exhibition of pathologic specimens every meeting, and I am convinced that there is nothing which could with greater profit be a regular part of the program.

Let us see the pneumonia, the typhoid ulcer, the endocarditis, the myocarditis, as well as the ependymal cysts of the cerebellum.

In talking this matter over with one of the pathologists he objected to showing the common run of pathologic conditions because there would be nothing new about them, and he would be an object of ridicule to other men in the same line. This is an unfortunate attitude and one which should not exist. Such demonstrations would not be of interest to a man constantly handling postmortem material, but I am sure that any pathologist in town would be glad of an opportunity to see a good example of typhoid ulcer if he had not seen one for two years. That is the position of the general practitioner in this matter. He has not seen these things, maybe, for years, and he will be very glad, indeed, to have the chance, and it is up to the pathologists to give him that opportunity.

Southern District.

The Southern District held its annual meeting Tuesday evening, Sept. 29, 1903, and elected officers for the coming year as follows: President, E. B. Hutchinson; vice president, Paul Chester; secretary, W. S. Harpole; treasurer, C. P. Pinckard; delegate to council of the Chicago Medical Society, Wm. Cuthbertson, W. S. Harpole.

Evanston Branch.

The annual meeting of the Evanston Branch was held September 29, 1903, at 8:30 p. m., in

the Woman's Club Rooms of the Y. M. C. A. building.

Fernand Henrotin addressed the meeting on the topic, "Pelvic Suppuration in Women."

The following officers were elected for the ensuing year: Chairman, W. R. Parkes; clerk, Mary G. McEwen; councilor, S. Victor Balderston.

There was a large attendance and the work of the new year was taken up with enthusiasm.

Mary G. McEwen, Clerk.

Lawndale Branch.

A meeting of the Lawndale branch of the Chicago Medical Society was held at the office of Robert Hardie, 1567 Ogden avenue, Oct. 13, 1903, at 9 o'clock, p. m.

Officers were elected for the ensuing year, and a paper was read by James B. Herrick on the subject "Modern Views Concerning Typhoid Fever."

By reason of the extent of territory included in the Lawndale branch, and the lack of an appropriate meeting place, it has been very difficult to organize this section, but through the kindness of Dr. Hardie the society now has a very convenient and comfortable place of meeting and every member of the general society is urgently requested to attend this and other meetings and thereby help to place this branch society on an equal plane of excellence with those reached by the Ogden avenue cars and transfers from any of the cross lines.

Fred C. Honnold, Secretary.

Chicago Medical Examiners' Association.

The meeting of the Chicago Medical Examiners' Association was held in the hall of the Chicago Medical Society, Schiller Building, on Tuesday evening, Oct. 27, 1903, at 8:15 o'clock.

Program.

1. What Points Can a Life Insurance Examiner Derive from an Ophthalmic Examination? G. F. Suker.

2. Glycosuria in Life Insurance, A. C. Croftan.

3. Relation of Tubercular Glands of Neck to Life Insurance, Daniel N. Eisendrath.

All medical examiners and others interested in life insurance are cordially invited.

Walter A. Jaquith, Secretary.

Southwestern Medical Society.

On Tuesday evening, Oct. 13, 1903, was held the first meeting of the Southwestern Medical Society for the new year, the September meeting having been devoted to the election of officers and transaction of business. About 40 were present at this meeting, and the interested and enthusiasm shown on this, the opening night of the year, promises well for the future.

The paper of the evening, "Common Errors in the Diagnosis of Skin Diseases," by Prof. Joseph Zeisler, was one of the most interesting and helpful papers to which the Society has listened for a long time.

The program committee, appointed in September, reported the following program for the ensuing year and printed copies were distributed:

Program, 1903-04.

October 13. Common Errors in the Diagnosis of Skin Diseases. Prof. Joseph Zeisler. Discussion opened by C. Hubart Lovewell.

November 3. Therapeutic Resourcefulness vs. Nihilism, Chas. H. Miller. Discussion opened by H. D. Roehler.

December 1. Fractures and Dislocations, C. H. Lovewell, Sr. Discussion opened by A. Davis.

January 5. Annual banquet.

February 2. Clinical meeting. Stereopticon Exhibitions.

March 1. Acute Respiratory Affections: 1. Nose and Throat, F. C. Eggert. Discussion opened by R. E. Ransmeier. 2. Chest, E. B. Fowler. Discussion opened by A. E. Mowry.

April 5. Diagnosis and Treatment of Malpresentations, F. L. Rose. Discussion opened by C. J. Phillips.

May 3. Differential Diagnosis of Severe and Trivial Eye Affections, F. T. Avery. Discussion opened by J. C. Millman.

June 7. Diagnosis of Acute Surgical Abdominal Affections, M. L. Harris. Discussion opened by J. J. Moorehead.

July 5. Acute Gastro-Intestinal Affections of Childhood, M. D. MacHab. Discussion opened by A. P. Horwitz.

August 2. Gynecologic Diagnosis, C. F. Weir.

September 6. Election of officers.

The Southwestern Medical Society of Chicago held its regular annual meeting for the election of officers, Tuesday evening, September 1. The following officers were elected:

President, T. C. McGonagle; vice president, H. H. Hagey; secretary and treasurer, C. Hubart Lovewell; delegate, F. R. Green; steward, A. Bell; official reporter, F. L. Rose. Committees on membership, program and organization were appointed by the new president.

On Tuesday evening, October 13, was held the first meeting of the new year for the reading and discussion of scientific papers and Prof. Joseph Zeisler read a most interesting and instructive one on **Common Errors in the Diagnosis of Skin Diseases**. In his opening remarks the reader stated that though the subject and title had been chosen for him by the committee on program it was almost identical with that of a paper which he read twelve years ago before the Chicago Medical Society and that he was gratified to be able to state that in his experience glaring errors in the diagnosis of this class of cases by the general practitioner were becoming rarer each year. A large portion of the paper was devoted to syphilis and illustrated by references to recent cases in his own practice.

The program committee reported the following program for the ensuing year as the result of their work and printed copies were distributed to members present. After a full discussion of Prof. Zeisler's paper the Society adjourned.

F. L. Rose,

Official Reporter.

The Southern District of the Cook County Medical Society (Chicago Medical Society) held its annual meeting, Tuesday evening, September 29, 1903. The meeting was held at

the Vendome Hotel, 62d street and Monroe avenue. Forty members were present.

Officers for the ensuing year were elected as follows: President, E. B. Hutchinson; Vice President, Paul Chester; Secretary, W. S. Harpole; Treasurer, C. P. Pinckard; Delegate to Council Cook County Society, Wm. Cuthbertson.

After the induction of the newly elected president, a paper was read by Chas. E. Paddock on **Obstetrical Emergencies**.

The regular monthly meeting will be held October 15, 1903, at the same place.

W. S. Harpole,
Official Reporter.

Chicago Pediatric Society. The first regular meeting of the Chicago Pediatric Society for the year, was held in Schiller Hall on the evening of October 20th. In response to an invitation from the Executive Committee, Dr. Hugh T. Patrick gave a very interesting talk on the subject of **Nervous Children**. Questions were asked and the subject discussed, many points of interest being brought out. A vote of thanks was accorded the speaker after which the meeting adjourned.

Emma M. Moore,
Official Reporter.

The Chicago Surgical Society held its annual meeting October 19, 1903. The following officers were elected for the ensuing year: President, Dr. E. Wyllys Andrews; vice president, Malcolm L. Harris; secretary, A. E. Halstead; treasurer, D. N. Eisendrath.

A. E. Halstead,
Official Reporter.

The North Side Branch of the Chicago Medical Society held its regular monthly meeting, Thursday evening October 8th at 8:30 p. m., at the Chicago Academy of Sciences. The following were elected officers for the ensuing year: Henry G. Anthony, president; D. Lieberthal, vice president; Mortimer Frank, secretary and treasurer and W. S. Christopher, delegate from the North Side Branch. The program of the evening was **Bowel Manifestations of the Infectious Diseases of Children** was opened by Dr. Christopher and discussed by Drs. Churchill, Walker and Kunz. After meeting adjourned the members were served lunch at a nearby hostelry.

Mortimer Frank,
Official Reporter.

The North Shore Branch held its first meeting after the summer vacation, Tuesday evening October 6, 1903, at Hipple & Clarks Real Estate office, 907 Wilson ave. The meeting was called to order by Chairman Herzog. The minutes of the last meeting were read and approved. Dr. R. B. Preble, President of the Chicago Medical Society addressed the society on the subject of **Some Unusual Pneumococcus Infections**. Dr. Herzog led the discussion and was followed by Drs. Green, Emil Beck, McClannahan, Kreusser and Preble.

Announcement was made that the subject of **Blood in Diseases** would be studied during the

winter. Some phase of this subject is to be presented at each meeting, the balance of the program for each to be made up of contributions of choice by the members. The meeting was unusually well attended and the interest manifested foretells a series of successful and profitable meetings for the coming winter.

George Edwin Baxter,
Official Reporter.

The Southern District of the Chicago Medical Society held its regular monthly meeting on October 15th. Thirty-one members were present and a profitable evening was had. The papers were:

Ophthalmias of the new born, Geo. F. Suker.
Experimental and clinical studies in the treatment of Diabetes, Alfred C. Crofton.

The November meeting will be held at the Vendome Hotel, 62d street and Monroe avenue, Thursday evening, November 19, at 9 p. m.

The papers to be read are:

The prevention of Tetanus, D. N. Eisendrath.
The elimination of Cellular Toxines by Inorganic Salt Solution, S. A. Matthews.

W. S. Harpole,
Official Reporter.

The Chicago Gynecological Society elected the following officers October 16th: Emil Ries, president; J. B. De Lee, first vice president; Frank T. Andrews, second vice president; Palmer Findley, secretary; Rudolph W. Holmes, editor; Charles B. Reed, treasurer; Gustav Kolischer, pathologist. The following is the program for November 20th:

1. Exhibition of Specimens.
2. Exhibition of Instruments.
3. Report of Cases.
4. Salpingitis, by Frank T. Andrews.
5. Modified Porro Operation with report of third case, by Carl Wagner, by invitation.
6. Etiology of Ischuria in Retroflexio-version of the Gravid Uterus, by Charles B. Reed.

Palmer Findley,
Official Reporter.

The Northwest Branch of the Chicago Medical Society held a regular monthly meeting on Friday, Oct. 2, 1903, at 8:30 p. m., at its usual meeting place, with President M. H. Luken in the chair.

The following papers, each of which was followed by a general discussion, were read:

Headaches and Their Treatment.

Julius Grinker read a paper on this subject before a recent meeting of the Northwestern Branch of the Chicago Medical Society. Headache in most instances is only a symptom; in some it is the most conspicuous symptom, while in still other cases it is the only symptom and may assume the dignity of a distinct disorder by itself. Factors entering into its production are: Organic diseases of the brain or its membranes; circulatory disturbances, such as anemia and hyperemia, arteriosclerosis, toxicity, infections, etc. Irritation of the sensory nerve-filaments of the dura by pressure or inflammation is probably the direct cause of most headaches. In the diagnosis of headaches attention should be paid to the mode of onset, duration, intensity,

and localization; each of these qualities is to be given due weight only in connection with accompanying symptoms. Cerebral organic headaches are usually very intense, circumscribed and constant, with or without remissions. They are described as cutting, boring or tearing; they may be dull and constant. Headaches caused by syphilis are worse at night or come on only towards evening. The nearer the lesion is situated to the cortex, the more intense is the pain and the more likely is percussion to elicit tenderness. The location of pain does not always correspond to the seat of the lesion. The eye fundi, the circulatory apparatus and the secretions will often furnish corroborative evidence, and enable one to make a correct diagnosis. Headaches due to circulatory disturbances in the brain cavity are divided into those caused by: (a) active hyperemia, (b) passive congestion, (c) enema, (d) arterial changes.

(1) The headache of active hyperemia is perceived as a fullness in the head, with throbbing of arteries, injected conjunctivae, flushed face. The headache is either diffuse or confined to the vertex; and is made worse by stooping or lowering of the head. (2) The headaches of passive congestion are not frequent. Causes are all conditions which interfere with the return circulation, viz., heart diseases, tumors pressing upon veins, tight clothing about the neck. (3) Anemic headaches are often vertical in location, and are usually described as a hot, burning pain. They are relieved by the recumbent postures. (4) Arterial changes produce headache, either mechanically or by the anemia due to narrowing of lumen. The neuroses, hysteria, epilepsy, neurasthenia, etc., offer quite a contingent of all headaches. The hysterical headache is often described as though a nail were being driven into the top of the head; is called *clavus hystericus* and is similar to the syphilitic headache, except that the latter is worse at night, and the former is often improved by diverting the patient's attention. A careful search will reveal some of the so-called stigma of hysteria. The epileptic headache usually comes on after the fit; is of the dull type, and sleep often terminates it. If the patient is forced to keep awake after a spasm, a postepileptic psychosis may develop. Headache may precede or may be the equivalent of a fit. The patients affected with epilepsy can mostly be recognized by their dull, listless appearance, the dilated pupils and sluggish mentality. Neurasthenic headaches are common and should offer no difficulty in diagnosis. These patients describe their headaches as paresthesias rather than pains. Many say they feel as though a tight band was constricting their heads or their skullcap is being lifted away from their heads, or there is a feeling of emptiness or fullness in the head. Most often they speak of a "misery" in the head, but no headache. The reflex headaches, the so-called "eye" and "uterine" headaches are in many instances only ordinary myalgic affections of the temporal and occipitofrontalis muscles. However, there are some genuine reflex headaches caused by disease in the accessory cavities of the head. The pneumogastric nerve, with its extensive distribution, may be held responsible

for the headaches due to disturbances in the thoracic and abdominal cavities.

Toxic Headaches.

Under this heading are included headaches due to the infections and poisons, both organic and inorganic. To mention a few: typhoid, scarlet fever, smallpox, malaria, prodromal stage of syphilis, alcohol, nitroglycerin, quinine, opium, cocaine, copper sulphate, chloroform, ether, lead, tea, coffee, tobacco. The headaches due to defective elimination of waste products may also conveniently be placed here: uremic headaches, gouty, lithemic, rheumatic, gastrohepatic derangements, constipation headaches. All the toxic headaches have this in common, that they are usually of a dull, heavy type, are most often frontal; are apt to be worse in the morning and pass away in the course of the day. The headache of migraine begins in childhood or early youth; heredity can be traced in the majority of instances. It occurs at intervals and lasts from a few hours to a day. Vertigo, nausea, or vomiting may either accompany or wind up the attack, during which there is hypersensitiveness to light, heat, and noises. The headache may be unilateral throughout, or may extend from one side of the head to the other. The so-called *aurae*, such as zigzag lightning, scotomas, temporary hemianopsia, or aural manifestations may precede the attack. In its entire make-up, the migrainous headache may be considered the sensory equivalent of the cortical or subcortical motor explosion called epilepsy. There is one class of headaches for which no cause is usually ascertainable. These are the so-called nervous headaches, also called idiopathic. They are the expression of a general nervous constitution, exist from early childhood, and appear to be inherited. This headache is chronic in type. It may last months, or years, and may even accompany the individual through life. It may occur in paroxysms or be constant. Trivial causes, such as a slight indiscretion in diet, will bring them on, or they appear without any cause. The pain is variously described: boring, pressing, tearing; it may be a dull pressure, or very intense, with hyperesthesia of the scalp. Women are more predisposed than men; they suffer in their general health, become irritable and melancholic, and may become disabled from following a vocation. Altogether, it has a tendency to sour their dispositions. The treatment of a headache must be directed toward eliminating its causes. In anemia, iron, arsenic, bitter tonics, and rest in bed are urgently indicated. In the headaches due to gastro-intestinal disturbances, antifermentatives and intestinal antiseptics are demanded. A brisk calomel purge has relieved many a headache due to constipation. In "reflex" headaches, the organs at fault should receive proper attention, and often the aid of specialists will have to be called in. Neurasthenic headaches are treated along the lines of the treatment for neurasthenia. A good dose of bromides has often done good. Hysteria requires its own treatment. The subjects of hysterical headaches being dominated by autosuggestions will tax the physician's skill to the utmost. Indirect

suggestion and a frequent change from one remedial agent to another, beginning with the mildest and holding the most powerful psychic agents in reserve, are often successful. The headaches of arteriosclerosis are treated with nitroglycerin and small doses of the iodides. One point in the treatment of all varieties of headache is to give the patient immediate relief and such can usually be secured by the administration of the coal-tar products, such as antipyrin, phenacetin, and others of this class. The heart should always be guarded in the administration of the depressant remedies; or else we may cure the headache but lose the patient.

There is no specific for the headache of migraine. It either disappears or becomes less frequent and milder at the menopause in women and in men at the age of sexual involution. During the attack, the coal-tar remedies, such as phenacetin, antipyrin, acetanilid, may mitigate the pain. It is very bad practice to resort to morphine except in the most aggravated cases. As a rule, patients prefer to be left alone in a darkened room with exclusion of all noises; no food is taken until the attack has passed off. Between the attacks a reliable fluid extract of *cannabis indica* may be used in ascending doses, beginning with 2 to 3 drops three times daily until a dose just short of poisoning symptoms has been taken for a few weeks. This is the only thing that has been found beneficial in some cases, and therefore a trial appears to be indicated in a malady where so little can be done. For the so-called nervous headaches we must order regular exercise, fresh air, a simple diet, hydro-therapy local and general, local applications of menthol, ether, chloroform, massage of the scalp, is necessary. Regular stools and good sleep are essential. Galvanism cautiously applied to the head in the strength of 2 to 3 milliamperes has sometimes been effective. Of drugs, the most useful are: antipyrin, salipyrin, salophen, phenacetin, caffeine and the caffeine sodio-salicylate and bromides.

The Diagnosis of Extrauterine Pregnancy by M. H. Luken; **Headaches and their Treatment** by J. Grinker. The following motions, made by Louis J. Pritzker, were disposed of in the following manner: To appoint a committee of three to draft by-laws for this branch. Motion carried. Drs. Fowler, Wagner and Sandberg were thereupon appointed.

To apply for a legal state charter for this Society as a branch of the Chicago Medical Society. Motion carried.

To appoint an entertainment committee of three, who shall arrange a banquet and reception to be held sometime during the coming winter. The principal object of the above being to bring the members of our profession, residing in our district, more closely together in a friendly and social way in order to foster greater fraternity among them. Motion carried unanimously. Drs. Pritzker, Wagner and Grinker were appointed. Adjournment until Nov. 6, 1903, then took place.

Louis J. Pritzker,
Official Reporter.

The Physicians' Club of Chicago held a regular meeting Sept. 28, 1903, at the Sherman House.

The meeting was called to order at eight o'clock, after the members and guests had partaken of a bounteous and delicate repast. Dr. William T. Belfield acted as chairman of the evening. He made some happy introductory remarks, speaking facetiously of the doctor's propensity for philanthropy, shown by his gratuitous rendering of personal services, his investments in gold and silver mines, Mexican plantations, and get-rich-quick schemes of all kinds; and especially by the constant efforts of the medical profession to prevent disease, and thereby incidentally destroy its own support—like the man who sawed off the limb of a tree on which he was sitting. He referred to the epidemic of suicide among physicians in Berlin and London, due in large part to the improvement in the public health and consequent reduction of physicians' incomes.

Fortunately the venereal diseases show a rapid increase; but should some modern Jenner discover a successful vaccination against these, many physicians will have to take to the woods.

Hydrophobia is of minor moment from the commercial standpoint—especially as nearly all the cases go to Dr. Lagorio. The rest of us may therefore consistently discuss means for protecting the public and the dogs.

He related the story of his first and only hydrophobia case which came to him as an interne in the Cook County Hospital. He was summoned to see a case of a boy who had been bitten by a supposedly mad dog and who was being brought up on the slow moving elevator on a cot upon which, astride of the boy's body two corpulent policemen were valiantly sitting. When the elevator reached the floor the guardians of the peace alertly jumped up and left the case to the doctor. He cautiously turned the boy over (the patient had been held upon the bed with his face crowded into the pillow so that he would not bite the courageous coppers) and discovered that the patient had died from asphyxia.

Dr. Ludvig Hektoen, Professor of Pathology in Rush Medical College spoke on the question from the pathological standpoint.

He limited himself to a few dogmatic statements (laughter). We owe most of our knowledge of hydrophobia to the genius of Pasteur. Although hydrophobia may affect many different kinds of animals, we are chiefly concerned here as it occurs in dog and man. The incubation period in man is from 14-18 days to several months, and it is only during this period that specific therapy can be employed with hope of success. The first manifestations are pain in the wound; pain in the nerves leading from it, and then the general nervous symptoms. Hence the clinical evidences point to the seat of the disease being in the nervous system and this is corroborated by experimental and other evidence. There are no special changes elsewhere than in the nervous system.

The microscopic changes in the nervous system are slight, consisting of congestions and minute hemorrhages. Microscopically there are perivascular infiltrations and there is an interesting formation of cells about the neurocytes of the various ganglia in the central and sympathet-

tic systems. The ganglion cells themselves degenerate and the surrounding cells proliferate especially in the intervertebral ganglia. At first thought to be distinctive of hydrophobia these changes have been found in cases of Landry's paralysis and in syphilis but in neither apparently so marked as in hydrophobia. Thus the microscope tends to further the idea that the seat of the disease is in the nervous system. The virus itself is found in the nervous tissues, the cerebro-spinal fluid and in the saliva. It is not present in the blood. In dogs it may appear in the saliva a few days before the outbreak of symptoms. The virus also enters the body by way of the nerves. It travels slowly upwards in the nerves corresponding to the infected area. One may inoculate successfully at first from these distal nerves near the wound but not from higher points. The great supply of nerves to the face accounts for the observed fact that bites in the face are much more quickly followed by serious symptoms than those in other parts of body. We conclude, therefore, that the virus of hydrophobia has a special affinity for the nervous system.

The actual material cause of hydrophobia is at present unknown. Bacilli, yeasts, protozoa have been accused. Negri considers it to be certain bodies found in the brain of infected animals and which appear like protozoa, but the crucial test of successful isolation and inoculation has never been fulfilled. Pasteur thought that the virus might be beyond detection with the present powers of the microscope. The virus of hydrophobia has long been said not to be filterable through filters which let certain ultra-microscopic viruses through, but it has recently been reported that successful filtrations of hydrophobic virus have been accomplished. If these observations are confirmed it may prove that Pasteur was correct in his surmise.

One practical lesson to be drawn from these fragmentary considerations is that in suspected cases of fatal rabies in dog or man, microscopic examination of the intervertebral and other ganglia may establish the diagnosis, at least provisionally, pending the results of the inoculation of rabbits which as a rule cannot be known for 16 to 20 days or so.

Dr. Arthur Dean Bevan, Professor of Surgery in Rush Medical College spoke on the question from the prophylactic standpoint.

He said that, inasmuch as there had been fourteen deaths from hydrophobia in this city during the past year, it was a subject of more than passing interest in this community. Anyone who had ever seen the horrible features connected with death from the disease could never forget them and must always recall them with horror.

In considering the prophylaxis there were two heads. Firstly, the prophylactic treatment immediately after the bite has been inflicted. He recommended swabbing the widely opened wound with pure carbolic acid, leaving the drug applied for one minute and then flushing off with 80 or 90 per cent alcohol. First apply a Martin bandage to free the limb from blood and then thoroughly cleanse the wound. He compared this treatment with the well known successful treatment of tetanus which Prof. John

E. Owens instituted at the World's Columbian Exposition, where not a case of lock-jaw developed in several hundred dirty punctured wounds of the feet.

Secondly, prophylaxis by governmental control and eradication of the disease in the dog. It has been proved possible to eliminate hydrophobia in England by legal restraint. There every dog is held to be under the responsibility of some person and stray dogs are destroyed. No dog can be brought into the British Isles without being quarantined for a sufficient time. All dogs at large must be muzzled all the year around. In five years of the workings of this law the number of cases of hydrophobia decreased from 300 to none and now it is an extinct disease in the United Kingdom. There are also good and efficient dog laws in Germany.

What has been done elsewhere could be done here if proper interest were taken in the subject by the city aldermen. Last year there were fourteen deaths from the disease in Chicago and this year so far twenty. The people are ignorant of hydrophobia. Many say it is a myth. The ordinance now in Chicago only requires the muzzling of dogs from March to November, during the warm months. Hydrophobia is just as prevalent in the cold months as in the summer. Another obstacle is from the ignorance of the lovers of dogs and of the humanitarians. They do not stop to consider that stringent dog laws which prevent hydrophobia in man also prevent suffering from the same disease among their four-footed friends. It is as much a mercy to them as to man to prevent hydrophobia. The speaker said he had received many abusive and some threatening letters from enthusiasts on account of what he had said and written on this subject. The proper body to act in this matter to bring the question before the Common Council of the City of Chicago was the Chicago Medical Society. We should demand the passage of a good dog ordinance and its strict and impartial enforcement. In no other way can the disease be controlled.

Dr. A. Lagorio, Director of the Chicago Pasteur Institute, read a paper on the subject of hydrophobia from the therapeutic standpoint.

Hydrophobia from the Therapeutic Standpoint by A. Lagorio, M. D.:

To properly understand the therapeutics of hydrophobia we must know the biological properties of the rabic poison, and what are its best neutralizers outside the animal organism. This virus has very little resistance to the action of the chemical and physical agents. The sunlight quickly destroys the virulence of the spinal cord of a mad rabbit in 14, 24, 30 hours, and it cannot resist high temperatures. According to Celli and Blasi the vapor of water at 100c. degrees destroys it in half hour, at 50 c. degrees in one hour, and that at 45 c. degrees in 24 hours; and according to Babes the same effect is obtained by a heat of 62 c. acting upon it for four minutes, and that of 58 c. in one hour. The atmospheric oxygen seems to have the same deleterious action upon the virus. On the other hand low temperatures 16, 20, 30 c. degrees below zero do not change the activity of the virus. The same can be said of compressed air and carbonic acid, in which

the virus will keep its infecting power for a long time.

The hydrophobic poison will maintain its virulence for some time if protected from heat and putrefaction.

Celli and Blasi have made some very interesting experiments to ascertain the resistance of the virus to the action of chemical agents. Corrosive sublimate solution 1 in 1000 quickly destroys its activity. Alcohol also has a marked action, while neutral glycerine will keep the virus unaltered for three months and possibly longer. This fact is to be remembered in sending specimens to the laboratory for experimental purposes.

A 5 per cent solution of carbolic acid neutralizes the rabic poison in fifty minutes; a 3 per cent solution in one hour, and a 2 per cent solution in two hours.

A 5 per cent solution of muriatic acid neutralizes it in five minutes, the same with nitric acid, and ten minutes with sulphuric acid.

A 5 per cent solution of zinc sulphophenate neutralizes it in 5 minutes.

A 1 per cent solution of pot. permanganate neutralizes it in twenty minutes.

A 1 per cent solution of zinc sulphate neutralizes it in ten minutes.

A saturated solution of nitrate of silver neutralizes it in five minutes, a 50 per cent solution in five minutes and a 25 per cent solution in ten minutes.

Creolin has a most pronounced effect upon the virus, a solution of 1 per cent neutralizing it in three minutes.

A saturated solution of caustic potash neutralizes it in ten minutes.

A 4 per cent solution of boric acid neutralizes it in fifteen minutes.

A 10 per cent solution of sulphate of copper neutralizes it in five minutes.

It is customary in Paris to throw all bodies and all unused parts of the dead rabid animals in a tub containing a four per cent solution of sulphate of copper. They are picked out by the scavengers with bare arms without fear of infection, as their virulence is known to be destroyed.

A 5 per cent solution of salicylic acid neutralizes the virus in five minutes and it takes ten minutes for ammonia, ten minutes for iodol and twenty minutes for iodoform. Iodoform therefore has a rather weak neutralizing action upon this poison, while on the contrary it has a marked one on that of tetanus.

Lemon juice, so readily found in every household, has a quick and marked action upon the virus, neutralizing it in three minutes. This remedy has been in use and held in high esteem by the inhabitants of Sicily for centuries. The experiments made upon it have shown that their belief is well founded. I could proceed on this line and relate many more studies, but time forbids. However, we have seen that the rabic virus has a weak resistance to the action of caustic and antiseptic substances.

In treating dog bites the question of cauterization presents itself. It is generally done by physicians as a practice brought down to us from times immemorial, and also because the patients expect to have it done. On account

of the rapid absorption of the poison, and as we cannot often destroy it in time, we must not rely on it too much. The statistics have demonstrated that the number of failures is about equal among those which have not been cauterized, as among those which have been cauterized with the actual or thermocautery. Babes and Talesescu made some interesting experiments upon this point. They impregnated large wounds made upon dogs and rabbits with the fixed virus and then cauterized them with the thermocautery after a variable period of time. The conclusion was that cauterization done after only five minutes did not guarantee against the evolution of the disease, and that by cauterizing within the first thirty minutes, only half of the animals were saved. But these experiments proved that although the animals could not be saved, death was considerably delayed. This is of great importance, for it demonstrated that by lengthening the period of incubation, we gain time, and the prophylactic treatment can be more successful.

The statistics of Proust show 78 per cent of deaths for wounds not cauterized; 66 per cent for late cauterization; and 20 per cent for immediate cauterization. Bouley was most emphatic in favor of it. Cauterization then should not be discouraged, and whenever possible it should be done at once after being bitten, with strong caustics capable of attacking deeply every part of the injury such as actual cautery, pure carbolic acid, and strong mineral acids. The wounds of the head and face should receive prompt attention and vigorous treatment; thorough irrigation with corrosive subl. solution, or creolin solution or lemon juice and also cauterized. Deep punctured wounds should be enlarged and treated the same. Extensive lacerated wounds should be irrigated with the same solutions in every part, and compresses applied of creolin solution until healed. Churchill tincture of iodine has also been a favorite of mine freely applied to wounds and cicatrices. I am surprised that so many physicians still apply poultices to this kind of injuries, they have no place in the treatment of dog bites. The physician ought to use good surgical common sense, as he would in treating any other infected wound. I am convinced that the brilliant results attained by the Pasteur treatment are in part due to the good attention given to the wounds in all institutes. Having had the wounds attended to the patient will ask: is there any danger from this bite? What must I do? The future life of the patient now depends on your answer and advice. If the animal is living, if we know where it is and seems well, it should not be killed but kept under observation for at least ten days. If after this time the animal is in a good healthy condition there can be no danger from its bite. It is a great mistake people make to kill the dog at once after being bitten. They do this on account of the prevalent and most foolish supposition that if a dog, although healthy now, should become rabid months or years after, the bitten person will also go mad. By killing the dog we destroy the chance of certainty as to the fate of the person and leave the imagination full rein to fear the worst results when it might

have been possible to know in advance that hydrophobia was impossible. There are exceptions to this rule that will suggest themselves to persons. When a dog is so vicious that to leave it alive is to endanger other people, then the first duty would be to destroy it unless it could be kept carefully secluded where the possibility of harm would be removed. But even in such cases where the dog is killed it should be done in the presence of a physician who should keep a portion of the brain for determining whether the animal had rabies or not.

When a person is bitten by a strayed vagrant dog which disappears and cannot be traced, the patient should be advised to undergo the Pasteur treatment, and the same advice should be given to a person bitten by a dog which has been killed at once, and the carcass destroyed or removed to an unknown place, so that no examination of it could be made as to ascertain whether it was suffering from rabies or not. There might be a possibility that the animal was not rabid, but it is far better that the patient be inoculated for a disease which he has not contracted, than to take chances of being stricken with hydrophobia. And lastly the treatment must be advised at once to persons bitten by animals recognized rabid by veterinarians or other competent men.

In this short address I cannot discuss as I ought to, the well known Pasteur method for the prevention of hydrophobia. We owe to Pasteur the important discovery that the rabic poison resides in its pure state in the nervous centers. That the activity of the virus becomes modified in the organism of the rabbit, of the guinea pig, and of the monkey, and that its virulence becomes fixed to a certain degree in each species. That the virus becomes stronger by passing through rabbits and guinea pigs, and weaker through monkeys. The principal facts which serve as basis of the Pasteur treatment are: 1st, the increase of the activity of the virus by its passage through rabbits. 2d, that the spinal cord of a rabbit, which has died from the inoculation of the fixed virus, loses by degrees its virulence by means of progressive dessication. 3d, that these graduations of attenuated virus have on animals a vaccinal power, that is to say protective against the action of strong virus. 4th, that its inoculation can be applied to the prophylaxis of rabies in man.

As human beings bitten by mad dogs do not usually develop hydrophobia until a certain period of incubation is passed, usually four to eight weeks after the bite, this time is utilized to render the person refractory. The Pasteur treatment being only a preventative, it must be applied before the definite symptoms of hydrophobia have developed. The sooner it is given after the bite, the more successful it has proven to be. The principle involved in this treatment is the establishment in the patient a tolerance to the poison from which he has been infected; and this is accomplished by repeated inoculations of a weak virus first, gradually progressing upwards, ending with the strongest. The method is more or less varied according to the severity of the bites of each case. The principle of the method is always the same, although multiple in

its application. The duration of treatment is from fifteen to twenty-one days.

Bites of the head and face have always been considered most dangerous, and the mortality figured by LeBlanc at 80 per cent, and by Brouardel at 88 per cent. Pasteur treatment has reduced it to 1.75 per cent. Bites on the hands with a mortality of 67 per cent have been reduced to 0.60 per cent, and the bites of the body with a mortality of 20 per cent have been reduced to 0.32 per cent.

The statistics of Proust and Faber place the general mortality of bitten persons at 20 per cent; LeBlanc at 16 per cent; Poland at 25 per cent and other observers give even higher figures. The report of the Pasteur Institute of Paris for 1902 among 1105 persons treated gives only two deaths or a mortality of 0.18 per cent.

Every great scientific discovery has never been accepted without opposition, and Pasteur's has had its share, however to day the profession in general has become convinced of its utility and advises it. Whatever opposition there is at present is only reduced among the timid or those who are rather incompetent to discuss it.

Once the symptoms of hydrophobia have developed, very little can be done beyond palliating the sufferings of the patient until the end is reached.

Novi and Roppi in 1892 reported the recovery of a patient from hydrophobia. The patient was about finishing a course of Pasteur treatment, when he began to show signs of hydrophobia of paralytic type. Intravenous injections of virus of the 5, 4, 3 days dessication were given, 14 in all, and the patient recovered. Murri in 1894 reported another recovery by intravenous injections, and Bordoni Uffreduzzi also had two recoveries. I tried the intravenous injections in two patients, stricken with the disease while under treatment, but the patients died.

The hydrophobic patient ought to be secluded into a darkened room. His ears plugged with wax, and no noises of any kind permitted in the room. Draughts of air must be prevented entering the room by keeping doors and windows closed. Air and water are the two greatest tormentors to a hydrophobic patient. No water should be brought in the room to his sight nor offered to him to drink, as every attempt at swallowing brings violent spasms of the muscles of deglutition and of the respiratory muscles of the larynx. Morphine should be avoided in the first stages as all other narcotics, but instead stimulants oxygen, hypodermoclysis of salt solution should be tried. The pharynx and larynx ought to be swabbed with a five per cent solution of cocaine which may allow the patient to hold little pieces of ice in the mouth, suck an orange, and possibly the stomach tube may be used to introduce nourishment and remedies. Curara I have tried and I thought with some benefit. The accumulation of thick mucus in the throat is most distressing to the patient. It should be removed, and a hypodermic injection of atropine is worthy of trial. Lastly chloroform by inhalation will afford the best relief in controlling spasms to the end.

Antirabic serumtherapy has had some attention; interesting studies upon it have been

made by Babes and Lepp in 1889. Tizzoni and Schwartz in 1892, and Tizzoni and Centanni in 1895 published some interesting studies upon this line. Babes and Tulesescu in 1895 confirmed Tizzoni and Centanni experiments. They also found that the serum had proven to be efficient on animals of the same species, as that of the dog upon the dog, and that of the rabbit upon the rabbit. However so far no serum to be applied to man has been prepared.

Studies upon this line are continuing, and let us hope that a serum will finally be discovered that will cure hydrophobia as successfully as Pasteur's discovery prevents it.

Mr. John G. Shortall, President of the Illinois Humane Society, spoke on the question from the humane standpoint.

After saying that his position was that of a listener and a learner rather than that of one who could inform the club, he tactfully alluded to the common interest of the members of the medical profession with the humane society authorities in the prevention of suffering, of which the world is so full. So far as he had learned, the cause of rabies is yet to be ascertained. He is satisfied that it exists—to a very limited extent, however. In all Italy, from 1881 to 1886, the average mortality was about 65 per annum. Then M. Pasteur's discovery was announced and an antirabic institute was opened in Milan; afterwards others in Turin in 1886, and following, those of Bologna, Padua, Naples, Palermo, Rome, Faenza and Florence. Now mark, in the fourteen years, 1887 to 1900, the single institute of Turin made 4896 anti-rabic cures; an average of 350 per annum. The speaker examines from the humane standpoint. Now England, which has given no adhesion to the Pasteur system in the same fourteen years, has had a total of 147 or 10.5 per annum.

Neither in Asia Minor nor in Constantinople, he is informed, is rabies known; yet, in Constantinople, dogs are so numerous as to be stumbled over constantly. A suggestion as to cause occurred to him when listening to Dr. Hektoen's description of the lesions in some forms of acute syphilis which are similar to those found in rabies, that perhaps a causal factor might be found in the deprivation in western countries of sexual gratification to so many male dogs.

Hydrophobia—the disease rabies developed in man—from the humane standpoint, seems to him to call when fully developed, for the quickest and most painless destruction possible of the afflicted life. But the spectacle of the poor dog, either afflicted or supposed to be with rabies, with a mob of half-crazed persons chasing him, shooting, clubbing, firing missiles at him, is a pitiable one. He has always urged that the afflicted animal when suspected should be separated from all life for at least four months, to allow a certain conclusion as to its disease. What a comfort to one bitten it would be to find that the animal had no rabies whatever and that related disease "Hydrophobia" be thereby avoided.

He advocated the capture by the net, which should be hung in every police station, and the seclusion of the suspected animal until such time as the diagnosis could be perfected. The bullet

could come when there was no longer doubt and aim could be safely taken, unshaken by the nervous fear which obtains during the excitement of a "mad-dog" hunt.

Dr. A. H. Baker, Treasurer of the Chicago Veterinary College, read a paper treating the subject from the veterinary standpoint.

Rabies is an acute infectious nervous disease affecting all warm blooded animals, but most often the canine race. This is due to the fact that dogs do more biting than animals of other genera, especially when rabid. A mad dog will bite a great many other animals, thus spreading the disease, while other animals, even when rabid do not usually bite to do much harm. This disease has been recognized and dreaded since the days of Aristotle, 322 B. C.; quite frequently it has existed as an enzootic, and seems to be increasing and spreading. The whole civilized world has been invaded by it, and it exists in every known country to day except Australia. The exemption of that country is due to the strict supervision over and quarantine of the dogs. It is much more common in the United States than is realized, and it is particularly prevalent in and around Chicago at the present time. Scarcely a week passes without a case or two of rabies coming into the hospital of the Chicago Veterinary College. No official statistics of cases of rabies are made in this country, but in Europe official reports show that it is very prevalent. Germany reports 1202 cases in animals in 1898, mostly dogs; France reports 2374 in 1899. Belgium had 444 cases in the same year; Great Britain had 727 in 1895, and Hungary had 1397 in the same year. It used to be supposed that rabies was more common in hot weather, dog days, than in other times of year, but statistics show that that is a fallacy. In 14066 cases recorded in Europe by months, 943 occurred in January, 1045 in February, 960 in March, 1323 in April, 1419 in May, 1467 in June, 1435 in July, 1294 in August, 1145 in September, 905 in October, 933 in November and 1137 in December. Another fallacy of the past was its supposed spontaneous origin under various unfavorable conditions. Although no specific germ has as yet been discovered, we believe, from analogy, that there must be one, for it runs a tolerably regular course and invariably terminates fatally in a more nearly definite time than almost any other disease. We conclude from experience that hardship, starvation, thirst, filth, heat, confinement or any other condition of environment has nothing to do with its origin but that in order to produce it, it is necessary to have the virus brought in contact with a wound where it may be absorbed. The virus is known to exist in the saliva, spinal cord and brain, and has been reported in the pancreas and milk. It can be removed from the saliva by filtration, indicating its existence in solid particles. When the virus enters the system either by the bite of a rabid dog or experimentally it remains for an indefinite time without producing any local or systematic effect, but is being carried to the spinal cord by the nerves and through it to the brain then this accomplished symptoms begin to develop. This period of incubation is variable. Ravenel gives the average in the various animals as follows: Man 40 days, dogs 21 to 40, horses

28 to 56, cows 28 to 56, cats 14 to 28, pigs 14 to 21, goats and sheep 21 to 28, birds 14 to 40. Rabbits inoculated subdurally 12 to 62. The period is shorter when the individual is bitten on the head than on the extremities. I have found the period in dogs usually runs from 15 to 21 days, and in horses 28 to 35. The virus is destroyed by drying and the action of light. Sunlight destroys it in 40 hours. When spread in thin layers it is destroyed by drying in 4 or 5 days. Roux found that the virus from a rabid brain was as virulent after four weeks immersion in glycerin at 30 c. degrees as when fresh. It is resistant to putrefaction. Galtier found the virus active in the central nervous system of rabbits after burial for 23 days, in sheep after 31 days, and in dogs after 44 days. A temperature of 50 c. degrees destroys it in one hour, of 60 c. degrees in half an hour, but it is uninjured by extreme cold, resisting a prolonged application of 10 to 20 c. degrees below zero. It is destroyed by a 5 per cent solution of carbolic acid in one hour, or by 1-1000 solution of bichloride of mercury. A saturated aqueous solution of iodine destroys it in ten minutes. The disease in dogs takes two forms, the furious and the dumb. In the furious he will bite viciously at anything that irritates him or that comes in his way, animate or inanimate and has an uncontrollable desire to gnaw. If loose, he will chew up and tear to pieces the carriage cushions, rugs, etc., if confined he will gnaw his chain, the woodwork or anything within reach. If a stick is pointed at him he grabs it viciously. Dogs in this condition often have bloody mouths from wounding of their gums. Saliva flows freely from the corners of the mouth, his voice is affected, his howl being hoarse and dismal, he is extremely nervous, never sleeps nor rests, but is watchful and uneasy, he will eat in the early stage, but his appetite is depraved, seeming to prefer rubbish to good food; he will try to drink water but seems unable to swallow it. After two or three days nervous paroxysms give way to paralysis and exhaustion. If loose, in his delirium he will wander away from home, taking a slow trot and keep it up, jumping at or biting any person or animal coming in his way, but occasionally, especially in the early stage, he will seek flocks of sheep and other animals and will worry them till he gets tired and will then continue his tramping, often covering long distances, only stopping when exhaustion and paralysis prevent further motion. In the dumb form about the first symptom seen is dropping of the lower jaw. The tongue protrudes and gets dry and brown. The countenance is changed to one of distress and anxiety. He is unable to bite or chew food and is unable to swallow. He will slobber in water about half the time, but is unable to drink. This form is usually quiet, no delirium, no howling nor inclination to rave. He is comparatively harmless, but the saliva is just as virulent as that of the furious type. On the second day the temperature begins to rise, which on the fifth day often get up to 106 degrees F. On the fourth day he begins to wobble in his gait from exhaustion and paralysis, which increases rapidly till death, usually on the fifth day.

In horses, the first symptoms of the disease, usually is rubbing or biting the bitten part,

great nervousness, inability to swallow, great thirst, and when trying to drink will have paroxysms, delirium, inclination to bite men, dogs and other horses, fever, paralysis, and death by coma in three to five days. Some veterinarians deny the existence of such a disease as rabies, but with such symptoms, course of the malady, and invariably fatal termination in a tolerably definite time as described above, it is a mystery how they can hold such an opinion. It seems to me that the motive is questionable. The practical prevention of rabies in this part of the country, where the only means of its spread lies in the dogs, is to catch and destroy all ownerless or tramp ones, and muzzle all others whenever they are taken off the premises of the owner.

Dr. Lagorio, in the discussion, said that the heat of summer was a factor rather against than favoring the spread of hydrophobia. He had placed dogs in the sunshine of hot weather and found that he could not give them hydrophobia even with the strongest virus. He urged muzzling all dogs the year around and killing of all stray and ownerless animals. Answering a question in regard to the possible length of the period of incubation for a long time, even for years, he said that in animals four months was considered a safe period. In man he had observed that three-fifths of the cases developed within two months after the bite, one-fifth within three months and the remainder after three months. Fifteen days was the shortest period he had known and the longest one year. The last case was of a boy bitten in the face. The dog which bit him showed the disease by inoculations on rabbits but the friends of the boy became satisfied with the application of a madstone. He died exactly one year after the bite. The case which developed the symptoms in fifteen days died in twenty-four hours, thus only sixteen days after receiving the bite.

In answer to a question about madstones he said that a madstone was a porous stone which was boiled or heated and thus the air driven out of its pores. It was applied hot and therefore acted precisely like a dry cup in sucking out the wound. The madstone superstition has a wide vogue among the laity, and especially in the southern states is the belief in the efficiency of this measure very prevalent and strong. He was surprised that many clergymen own such a relic of barbarism, and the officials of the state of Ohio kept one in the capitol.

Dr. Joseph Zeisler, in the discussion, described the horrors of the only case which he had been so unfortunate as to see. It occurred twenty-three years ago and was observed by the doctor for twenty-four hours. The sight of the agonies of the patient was terrific, the intervals of a few minutes of rationality, then spasms furious in character and finally death in great anguish. He related the case of a man who had spoken to him about his fine hunting dog which had acquired the habit of masturbation and which afterwards developed suspicious symptoms and was shot. Before executing the animal however the master had several times thrust pills down the dog's throat and was in great mental disturbance lest he might have

inoculated his hands through some imperceptible wound.

Drs. Martin, Parron and Ochsner of New Orleans, who were guests were called upon and replied in happy vein. Dr. Martin asked the advice of the members as to how best to muzzle the animals which troubled his community more than hydrophobic dogs did Chicago, namely, the malarious mosquitoes.

Dr. W. L. Baum moved that the directors be requested to confer with the Council of the Chicago Medical Society to devise measures looking to the passage and enforcement of an adequate muzzling and dog law in this city. Carried.

The meeting adjourned at ten o'clock. There were present fifty members and guests.

Clinical Reports

A Case of Repeated Abortions due to a Retroverted Uterus. Treated Successfully by Massage and Gymnastics.

By Dr. George Rubin, Chicago, Instructor in Gynecology at the Medical Department of the University of Illinois.

In an article entitled: "Massage and Gymnastics in Gynecology," which appeared in the Chicago Medical Recorder, November, 1902, I reported among other cases one (Case VIII) that was much like the one described below, but in which the result of the treatment was unfortunately negative. I am therefore glad to have the opportunity to report the following case.

Mrs. Fannie R., Hungarian, housewife, 29 years of age. Has always been well prior to her marriage. She menstruated at fourteen and was always regular. Six weeks after her marriage she aborted and two other times afterwards; three abortions in about six months. Since her first abortion she experienced pain in the back, bearing down and same pain in the right iliac fossa. At times she had to urinate frequently, which was accompanied by a burning sensation. She also complains of general nervousness, constipation, loss of appetite and occasional sleeplessness. She comes to me for advice in regard to her inability to bear children and complaining of her husband's unkind treatment on that account.

Examination.

Inspection: She is of a very small stature, but rather proportionate. Appears to be well nourished but somewhat pale, though her mucous membranes show no evidence of anaemia. Chest normal, temperature and pulse normal, urine normal.

Bimanual Examination per vaginam and rectum revealed a slightly enlarged retroverted uterus, cervix low down in the vagina. There is some pain on pressure about the right adnexa, but they are apparently normal in size and consistency.

Ocular Examination with a bivalve speculum showed a scanty, thin leucorrhoeal discharge

from cervix, although patient claims that at times there was rather a profuse discharge.

The diagnosis was of course plain and I attributed all of her subjective symptoms to the uterine displacement.

Treatment: I recommended massage and gymnastics, which was accepted, and I also prescribed for her iron, quinine and strychnine in capsules.

She menstruated three weeks after the treatment* was commenced, her regular time. Four weeks later she was happily disappointed by not menstruating. I discontinued the treatment and waited for developments.

She called at my office once a week to report. I examined her from time to time, but failed to find very marked improvement in the position of the uterus, to be sure there was some, the cervix was higher up and pointed a little posteriorly. She soon developed morning "sickness" and some "queer longings," etc., which make up the usual early signs of pregnancy. Before very long positive signs made their appearance.

Labor was due August 27, 1903, figuring from her last menstruation which occurred November 20, 1902. But she did not go to term. It came on the 1st of July fortunately. I say fortunately because she had a generally contracted pelvis, of a slight degree, although in that case I should call it normal, considering the size of the woman. She is four feet eight inches in height and her pelvic measurements are:

Interspinous	20 cm.
Bis-iliac	22 cm.
The conjugate	9 cm.

That is better than could be expected under the circumstances.

She was in labor about eight hours, with the exception of a slight unavoidable tear everything was uneventful. The child weighed about five and one-half pounds.

Now the question is what was the *modus operandi* of the treatment in that case?

I admit that there was not sufficient improvement in the position of the uterus to account for the successful result, and there was nothing in her mode of living during that time that could have wrought the change. So what then did the Brandt treatment do? I believe it did this; it equalized the pelvic circulation and relieved the congestion of the uterus, which is invariably present to a greater or less degree in all displacements.

By decongestion of the uterus and at the same time increasing the tone of the uterine musculature, it lessened the tendency of the uterus to throw off the ovum which it did before the condition was relieved. Whatever skepticism this report might call forth from the reader—it nevertheless deserves some consideration, since many similar cases have been observed before, especially by Brandt and Stapfer.

The method is very simple and the technique is easily acquired. Every physician who has to deal with such cases ought to try the treatment in question. If only one succeeds in a small percentage of cases it is well worth its employ-

*For the technique of Gynecologic massage and gymnastics, see Author's article in the Chicago Medical Recorder, Nov. 1902.

ment and thus save many women from surgical operations, which does not always insure successful results.

State Items.

A serious epidemic of smallpox was discovered at Lemont by Medical Inspector Spaulding, of Chicago.

Dr. Geo. F. Stericker of Springfield has been elected Medical Director of the recently organized Sterling Life Insurance Company.

Dr. James Whitney Hall recently of Bloomington, has entered the service of the Prudential Life Insurance Company and been appointed general agent in northern Illinois.

The Wabash Railway Employes Hospital at Decatur has been completed and was occupied for the first time Oct. 10. Dr. P. M. Parrish, of Decatur, has been appointed surgeon in charge. The hospital has been located in Springfield since 1883.

Dr. W. K. Jaques, head of the municipal health laboratory for several years has resigned. Dr. Jaques states that the work of the city was encroaching too much on his private practice. Dr. F. E. Wynkoop has been appointed temporary superintendent of the laboratory.

Found at last—A patent medicine which is not guaranteed to cure everything and everybody. The following advertisement recently appeared in the Chicago Tribune: "For Sale—Patent Medicine Business; plant, machinery, copyrights, trade marks; mail order started; owner sick."

The following advertisement found in one of the Chicago daily papers may partially explain why the profession is overcrowded: "Study medicine; learn an honored profession. We take only limited number of students and give thorough instruction to small classes. Low fees; noted faculty. Write for free catalogue. College of Medicine and Surgery, 245 Ashland Boulevard, Chicago."

Dr. J. Mansfield, one of the oldest and most prominent physicians of Washington, Tazewell county, who was last week tendered the position of physician at the South Bartonville hospital for the insane by Governor Yates, has declined, giving as his reason that he is of the opinion a younger man is more fitted to fill the place.

Physicians and medical students hereafter will be obliged to pay a higher price for surgical instruments. The American Surgical Trade association, in session in the Victoria hotel, Chicago, abolished the discounts allowed in the past and established new rates, the most liberal discount being 5 per cent for payment in ten

days. Ten per cent will be allowed for goods purchased by druggists, medical colleges, hospitals, sanitariums, and public institutions for their own use.

At the recent meeting of the Illinois State Conference of Public Charities, the Quincy jail was declared unfit for a human being by John J. Sloan, superintendent of the Chicago Bridewell, in an address. He also condemned the management and said the food served the prisoners was not fit for a rabbit to eat.

The county jails of Illinois, according to Judge Humphrey of the United States court, are not fit places for human beings. Twice has he refused to send prisoners to county jails where the sentence is more than thirty days, and recently he committed a half dozen to the Peoria workhouse and stated he would never send any man to an Illinois jail until they were made sanitary and properly ventilated.

The mayor of Mattoon was recently indicted, tried and deposed from his office on the charge of malfeasance. One of the charges was that he entered into a conspiracy with a physician of the city, in which he made an order that the women of the town must pay for protection under the guise of health certificates, the charge upon which was \$1 per week, the mayor to have half the fee.

After the use of a sacred relic cured her injuries, she alleges, a jury in Judge Mack's court gave Mrs. Agnes Elwood a verdict for \$5,000 against the Chicago City railway company. It was the third trial of the case.

Mrs. Elwood sued for \$50,000, alleging that her hip, knee, and ankle were injured May 19, 1898, while she was alighting from a street car at Evans avenue and Forty-seventh street.

The plaintiff told the jury she was miraculously cured Aug. 19, 1902, by the application of a relic of St. Anne, in St. Joseph's church, Thirty-eighth place and California avenue.

Proof of the baneful effect of higher education on the matrimonial prospects of young women was furnished when the first "General Register" of the University of Chicago appeared with statistics for the first decade of the university's existence. Here are the figures recently published:

Number women graduates (ten years) ..	583
Number married	107
Number teachers	305
Percentage women married	18.0
Percentage women teachers	57.5

In 1893, the first year in which the university conferred degrees, three women were graduated, and all were married. The next year nine women were graduated, but not a one was married. Seven became teachers.

The highest per cent of marriage—except that 1893—was attained in 1896, when 20 out of 39 graduates were married.

Peoria, Ill., Oct. 21.—Warrants charging murder were tonight issued for the arrest of E. A. Sorrells and Thomas Flynn, guards at the Illinois Asylum for the Incurable Insane, who

struggled with Thomas Hartley, an insane patient whose home is in Chicago, and from the effects of the struggle died within an hour and a half. Sorrells was examined for three hours today and he refused to answer, issuing a signed statement to the effect that he feared he would incriminate himself. Flynn refused to answer any questions propounded. The autopsy shows that Hartley had six ribs broken and almost every vital injured. Coroner Harper called a halt in the proceedings and consulted State's Attorney Tefft and the warrants were issued by Squire Moore.

Warrants for Sorrells and Flynn were placed in the hands of Sheriff Potter tonight, but up to midnight the sheriff has been unable to locate the men. It is thought that they have left the country and the papers will be served tomorrow morning.

In his third sermon on homemaking in the Stewart Avenue Universalist church recently Rev. R. A. White, of Chicago, advocated some radical laws regulating marriage. He said in part:

"To sentimental people it will seem little less than a sacrilege to insist upon the following regulations of marriage as a matter of social safety: First, a medical examination of parties proposing to marry; second, investigation of the ability of the man to support a family; third, a careful examination as to criminality in cases where the applicants for marriage licenses are from classes of people of criminal tendencies; and in each case a refusal of license if the result of the investigation is unfavorable.

"It must increasingly be seen that marriage is not merely a personal matter, to be left to personal whims and caprices, but a great social factor, freighted with boundless good or terrible evils. Marriage laws based on modern scientific knowledge would, in a few generations, do more toward reforming our various evils of pauperism, disease, and crime than all our multiplied and well intentioned benevolences combined.

"We have a desperate tendency to work at the wrong end of our social problems. We are absorbed in the problem of cure and too careless of prevention. Marriage is the place to begin reforms of wide reaching influences."

John Alexander Dowie, "Elijah II., the Restorer," self proclaimed messenger of God, who is to lead a host of his followers from Chicago on October 14, to rescue New York from perdition, has planned a vigorous campaign in the eastern metropolis.

The Zion "restorationists" will number 3,000, and the crusade will cost \$300,000. There will be uniformed Zion guardsmen 870 strong, with Bibles swinging at their sword belts. There will be a white robed choir of 700 singers. There will be a fife and bugle corps and a Zion band of seventy-five pieces. The hosts will be quartered in Madison Square Garden.

"A little man with bandy legs," as he describes himself, the Rev. John Alexander Dowie is the general overseer of the Christian Catholic Church. In Zion, a church organized by him-

self. Ten years ago he landed in Chicago a poor missionary for an unpopular cause, and today his followers number 100,000 and his dollars 5,000,000. More than that, he has built up Zion City, a town numbering 10,000 inhabitants, on the shores of Lake Michigan forty-two miles north of Chicago.

Dowie is a Scotchman by birth, but went to Australia when a boy. He studied for the ministry and was ordained in the Congregational church in 1872. Renouncing this church to become an evangelist, he traveled all over Australia and England, eventually reaching Chicago in the exposition year. Since then his success has been phenomenal.

Complaint has reached the editor concerning the transactions of one H. D. Easterly, claiming to represent the Peoria Health and Accident Association (in process of organization). On June 10, 1903, he gave one of our members a certificate, a copy of which without the name, follows. The doctor states that since paying his money he has failed to find any trace of Mr. Easterly and to hear anything from the letters written to Peoria to the officers.

"\$15.00 Ill., June 10, 1903.

Received of M. D., fifteen dollars and application for membership and Indemnity Certificate in the Peoria Health and Accident Association (in process of organization), Peoria, Illinois. Unless you receive notice of your acceptance or your money is returned within two weeks from the date of this receipt, please notify the Home Office, giving name of person to whom money was paid, amount paid and date when paid.

It is expressly understood and agreed that said application shall not be binding on the Association for indemnity until after the certificate has been issued and delivered to said applicant or member and said applicant has paid the certificate fee of \$1.00.

H. D. Easterly.

Your next payment will be due ninety days from date of your certificate. Payments are due monthly. Certificate fee of \$1.00 must be paid on delivery of certificate."

Col. Frank O. Lowden, candidate for the nomination of Governor in announcing his candidacy said the following which is of interest to the physicians of the State:

"I believe in the principle of the merit system of public appointments; but whether or not positions are in a classified service, merit should be the first requisite for appointment.

"An appointee's tenure of office should depend upon his loyalty to the State, not upon his personal devotion to the executive. It is my ambition to be governor of Illinois, and not a party manager.

"The best men that can be secured should compose the managing boards or trustees of state institutions, and they should be held solely responsible for the management of the same, wholly free from executive interference, except where such management shall have demonstrated incapacity or improper care of such in-

stitutions. In that event, executive interference should be limited to removal of the persons thus delinquent."

Mr. Deneen, another candidate for the nomination has announced himself in the following language:

"The state penal and reformatory and charitable institutions ought to be placed in such a position that they could be managed in such a way that no private institution in the state could excel them, and certainly no private institution would feel safe in having rules—or, rather a plain understanding among all those employed—that they would likely be removed at the slightest whim of a new administration, or a new superintendent."

Judge Sherman, another candidate, speaks thus of civic societies:

"If anything is to be accomplished men of affairs and civic societies must take the initiative. They must take sides. I like the man who takes sides, for he is the only man who accomplishes anything."

One Arthur C. Probert, said to be the promoter of the alleged St. Luke's Hospital of Niles, Michigan, appears to have been finally brought to book for his efforts to use the mails to defraud. From the Chicago daily papers we take the following extract from a sketch of his career as a "physician:"

"Probert's title of banker is said to have been well earned, but that of "doctor" is said to have been conferred upon him after a one day attendance at a Chicago "college." As a "physician" he is said to have been the head of one hospital and a director in another, both of which have been set down on the records of the Chicago Medical Society as "diploma mills."

It was in connection with one of these institutions, the Christian hospital, at 617 LaSalle avenue, that Probert became involved with the federal authorities.

The LaSalle avenue institution was called to public attention on June 3 last, when Dr. J. B. Murphy asked Judge Jesse Holdom to restrain the hospital and its officers from using his name and signature on certain "certificates" which it issued. These "certificates" were sold to physicians at from \$20 to \$25, and, besides purporting to give the holder "official standing," gave him also certain commissions on all medical cases he might send to the hospital.

Dr. Murphy declared that the use of his name was unwarranted, and evidence secured by the Chicago Medical Society resulted in the arrest of Probert and others on a charge of using the mails to defraud.

The medical society's investigators at that time also secured evidence of a similar institution at Niles, Mich., known as "St. Luke's hospital," which Probert conducted in 1900.

The Niles institution sought to secure the use of the name of Dr. Nicholas Senn on its "certificates," but Dr. Senn prevented it. A crusade by the medical men of repute resulted in the abandonment by Probert of the St. Luke's hospital at Niles.

Probert was convicted of embezzlement and sentenced to the penitentiary at Waupun, Wis.

He was committed July 23, 1896, and remained in prison until Sept. 9, 1898.

Malpractice Suits.

Dr. Harold N. Moyer, chairman of the legal committee of the Chicago Medical Society, in an article on Forensic Medicine, in the Practical Medicine Series of Year Books for the current year, says in a review of the current literature on the subject of malpractice suits: "They are increasing in frequency, but the number of suits successfully prosecuted is no greater, if there are as many, as a few years ago. The increase in this class of litigation seems to be dictated by the same influences that have increased the personal injury litigation throughout the country. The legal construction in this class of litigation has remained substantially the same, in the code and common law states. There have been minor rulings on given sets of facts that have some bearing on individual cases, but they do not affect the general principles of the law applicable to this class of litigation. By far the larger number of suits are brought without hope of coming to successful trial, but are urged by disgruntled patients to avoid the whole or a portion of the physician's just compensation, or else are a species of blackmail urged by unscrupulous attorneys.

This situation has attracted attention, throughout the country and has led physicians to combine for mutual protection. A couple of insurance companies have been started for the purpose of insuring physicians against loss from this class of litigation. In imitation of the English protective association, some medical societies have undertaken to protect their members against unjust suits of this kind. The experience of the English association has been very happy. At a nominal cost of a few shillings for each member they have provided attorneys, and successfully defended their members. The cost of the co-operative plan as inaugurated in England has been a mere fraction of the premiums charged by the insurance companies in this country, and yet the protection has been adequate. It has been the experience of these mutual associations that the majority of suits actually begun, or threats of suits, are what are known in slang parlance as a "shake down" for the doctor. Rather than appear in court or go to the expense of retaining an attorney for the defense of the suit, the plaintiff and his attorney hope that he will pay a small sum—from one to three hundred dollars—and thus avoid the trouble and worry of litigation and the incidental publicity. It is this class of litigation that is so effectively met by a co-operative plan. Retaining an attorney who will docket the cases, all that a physician has to do is to turn the matter over to a committee, who will look after the litigation and who can do so without much expense. A further valuable effect of such co-operative methods would be to give the profession valuable data upon such suits, their basis and the best means of defending them. If it were once generally known that no suits of this kind would be compromised, but would be fought to a finish, it would lessen the number of blackmailing malpractice suits to almost the vanishing point. In this, as in other matters,

the "ounce of prevention is worth a pound of cure," and it is to be hoped that the co-operative plan will receive wider application in the near future. There is no reason why it should not be made a function of all regular medical societies. In cases where the local society is of sufficient size, it can have a bureau of its own. Where local societies are too small, they can be aggregated together for this purpose, but in many instances the state society might undertake the work. The Chicago Medical Society, with its 1400 members, began this work with the beginning of the current year. In that short time no cases have as yet been tried, but a number has been disposed of in various ways, saving the members expense and trouble. The Chicago Medical Society set apart a sum amounting to one-fourth the annual dues, for this purpose. An attorney was retained by the year to look after the cases. In many instances a letter from the attorney stating that he had been retained and no offer of compromise would be considered, was sufficient to end the proposed litigation. A co-operative plan such as this among the physicians will be quite as efficient and vastly less expensive than insurance in a company organized for the purpose. The physicians can do the work for each other with less expense and quite as effectively as an insurance company."

This subject is one which should receive the attention of the medical societies. With the more perfected organization of the profession of counties and states mutual protection could be secured. The plan proposed would accomplish good, not only by protecting the individual against malpractice suits, but also in uniting the members of the profession.

Other State Societies.

California.

The California State Journal of Medicine is nothing if not plain spoken. Fortunately its editor is a man of high morals and the Journal is kept to the high standard which he advocates. It appears to us that he is a little too exacting when he insists that all papers read at the annual meeting of the State Society should first appear in the Journal of the Society. The utmost freedom has been given to our members in this matter and no dissatisfaction results. It is probably true however, that articles read at the annual meetings will obtain a larger number of readers if printed in the State Journal than if printed elsewhere.

Virginia.

That the Governor of Virginia is not afraid of "government by society" was shown by his approval of a bill passed by the Virginia State Legislature at its last session creating a State Examining Board for Trained Nurses. This board is composed of five members to be selected by the governor from twelve nominations submitted to him by the Virginia State Association of Graduated Nurses. Examinations by this

board will not be required of nurses who graduate prior to January 1, 1904, and in the language of the bill: "This Act shall not be construed to affect, or apply to, the gratuitous nursing of the sick by friends or members of the family; and also it shall not apply to any person nursing the sick for hire, but who does not in any way assume to be a registered or graduate nurse."

New Jersey.

The State Board of Medical Examiners of New Jersey has secured amendments to the Medical Practice Act of that State by which the academic standards for admission to the State examinations have been raised from a competent common-school education to a diploma issued after four years of study in a normal, manual training, or high school of the first grade in that State, or its equivalent. The medical requirements have been increased from three to four courses of medical lectures of at least seven months each, in different calendar years, prior to receiving the degree of Doctor of Medicine. The amendments went into effect on July 4th. After that date candidates for examination, or for the indorsement of a license issued by a recognized examining board of another State, will be obliged to comply with the new standard of requirements for a New Jersey license.

Kentucky.

The last issue of the California State Journal makes the following remarks concerning the Kentucky State Medical Association Bulletin which has been established as the official publication of the Association, and has reached its third issue. "We are certainly glad to see another addition to the number of state association journals, for in time these publications will probably do away with a large number of the cheap and vile so-called 'medical' that have come up all over the country and thrive on discreditable advertising. Many of these 'journals' are owned, body and soul, by one or more nostrum manufacturers, and they are used to aid in debauching the minds of a certain percentage of physicians. It is not easy, unless one knows or has had much experience, to tell the sheep from the goats, and the 'reading notice' giving a large sized endorsement of some nostrum may be as well written and read quite as entertainingly as a proper and scientific editorial in some other and reputable journal. A few new remedies are excellent, have an unquestioned value, and are such as to tempt one to occasionally speak a word of commendation. Yet these are comparatively few, whereas the great mass of preparations concerning which 'reading notices' are published are either worthless or out and out nostrums, not fit for any man to use or prescribe. Because these things are true, all reputable medical journals, and especially the official publications of states medical societies, should absolutely refuse to print in their reading pages any sort of advertising matter—and the 'reading notice' is advertising. The Kentucky State Association Bulletin contains a 'reading notice,' and without in any way reflecting upon the value or the worthlessness

ness of the thing so advertised, we do not like to see it. We certainly cannot ask private journals, operated for profit, to 'please be good,' when the official publications of medical societies commit the offenses which the medical profession desires to have corrected."

Marriages, Deaths and Changes of Address.

Marriages.

Emil C. Becker to Miss Ida Grace Beal, of Chicago, Sept. 16.
Chas. A. Ballard, of Chicago to Miss Mabel G. Steen, of Waukesha, Wis., Oct. 20.
C. P. Colby, of Springfield to Miss Grace Bullard, of Mechanicsburg, Oct. 29.
W. W. Coleman to Miss Bida Dunham, both of Lawndale, Oct. 14.
John G. Craig to Miss Alma Willét, of Chicago, Sept. 16.
Winfield B. Martin, of Freeport to Miss Iona MacDonald, of Chicago, Sept. 30.
C. C. Patchen to Miss Arminia M. Reed, of Mt. Sterling, Oct. 15.
Herman F. Schlieffarth to Miss Edna Dowling, of Chicago, Oct.
B. F. Shanahan to Miss Elizabeth Deutsch, of Chicago, Oct. 14.
H. G. Vernon, of E. St. Louis to Miss Maud Cooper, of Farmingdale, Oct. 21.
Chas. S. Williamson to Miss Josephine G. Stillwell, of Chicago, Oct. 15.

Deaths.

Cox., William M., Mt. Sterling, Sept. 14, aged 65.
Landon, Wesley M., Quincy, Sept. 13, aged 75.
Miller, Elias, Kensington, Sept. 5, aged 65.
Schlesinger, M. L., Chicago, Oct. 7, aged 37.
Schnell, Philip J. V., Chicago, Oct. 21, aged 35.
Smith, J. A., Manchester, Oct. 8.
Wingren, Edw. S., Chicago, Oct. 17, aged 29.

CHANGES OF ADDRESS.

Changes in Chicago.

Adams, Nathaniel K., 225 Oakley Boul. to 887 Jackson Boul.
Beardsley, J. A., 6405 Eggleston ave. to 6506 Peoria st.
Bidwell, T. S., 69 Laflin st. to 700 Leland ave.
Campbell, J. F., 103 State st., to 3519 Indiana ave.
Carpenter, T. G., 103 State st., to 67 Wabash ave.
Darling, C. G., 3823 Lake ave., to 50057 Washington st.
Dolan, A. N. J., 905 Wilson ave., to 853 Wilson ave.
Fortner, E. C., 579 W. Adams st., to 3462 South Halstead st.
Gould, Henrietta, 266 South Lincoln st., to 650 Congress st.
Holmes, Frank, 425 Center st., to 1228 Wilton ave.
Larned, E. R., 4217 Calumet st., to 5751 Prairie ave.
Manierre, C. E., 552 LaSalle ave., to 95th and Western ave.
Miller, C. H., 2731 LaSalle ave., to 6349 Jackson Blvd.

Miller, R. E., 5859 Wentworth ave., to 441 E. 31st st.

Prendergast, Joseph, 868 N. Park ave., to 417 Lake View ave.

Stillians, C., 103 State st., to 230 W. Chicago ave.

Schaller, George J., 1127 N. Clark st., to 518 Fullerton ave.

Walling, 103 State st., to 4127 Drexel Blvd.

Woelful, A., 4017 Vincennes ave., to 303 Ashland Blvd.

Young, C. C., 4216 Berkley ave., to 103 State st.

Young, N. A., 4216 Berkley st., to 103 State st.

From Chicago.

Adams, Carlos J., 856 W. Monroe st., to La Grange, Ill.

Coolidge, 103 State st., to Saranac Lake, New York.

Gallaway, D. H., 200 Oakwood st., to Paethe, Idaho.

Hohf, S. M., 213 Walnut st., to Yankton, S. Dak.

Patton, J. A., 103 State st., to Charleston, Ill.

Patterson, R. W., to Melrose, Minn.

Platz, C. H., to Columbus, Neb.

Smith, C. C., to Merrill, Wis.

In Illinois.

Heise, Ellen H., Canton to 58 Lake st., Oak Park.

To Illinois.

Carriere, V. A., St. Louis, Mo., to Litchfield.

Seawright, Edwin, Crawfordsville, Ind., to Danville.

Ricketts, Howard T., Kirkwood to 5498 Cornell ave., Chicago.

From Illinois.

Tydings, Oliver, Chicago to Piqua, Ohio.

New Incorporations.

The following corporations have been licensed by the Secretary of State at Springfield: St. Thomas Sanitarium, Chicago; capital, \$2,500; maintain hospitals and sanitariums; incorporators, Eugene Dupée, John T. Richards, and Frank T. Milchrist.

People's Sick Benefit and Aid Association, Chicago; charitable; incorporators, Lawrence W. Quirk, James P. Brennan, Rudolph H. Fremont. Illinois Osteopathic Association, Bloomington; advancement of the science of osteopathy; incorporators, J. D. Cunningham, Lola L. Hays, E. M. Browne.

Parke, Davis & Co., Michigan; capital, \$5,000,000; licensed to transact business in Illinois with \$122,000 capital.

Institute for Gastro-Enterological Diseases, Chicago; capital, \$5,000; care and treatment of the sick; incorporators, Robert W. Childs, Lester C. Childs, George Q. Alleman.

Home Medicine Co., LaHarpe; capital, \$50,000; manufacturing proprietary medicines; incorporators John H. Hungate, Clarence A. Kapfenberger and I. Hurdie.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Abbott Alkaloidal Co.....	XVI	Irwin, Neissler & Co.....	XV
American X-Ray Co.....	IV	Kress & Owen Co.....	VI
Broadwell, Stuart	XIII	Maplewood Sanitarium	XV
Breitenbach, M. J. & Co.....	VII	Michigan Medical Journal	XVII
Colegrove, E. H. & Co., Books	XII	Milwaukee Sanitarium	XII
College of Phy. and Sur., Chicago	XVII	N. Y. Polyclinic	IX
Chicago Eye, Ear, Nose and Throat College	III	North Western University Med. School ..	IV
Chicago Polyclinic & Hospital	XVIII	Parke Davis & Co.....	XX
Cincinnati Sanitarium	IX	Polk's Medical Register.....	XIV
Crittenton, C. N. Co.....	X	Post Graduate Med. School of Chicago ...	III
Decatur Drug Co.....	XIII	Presbyterian Hospital of Chicago.....	II
Denver Chemical Mfg. Co.....	VIII	Purdue Frederick Co.....	XIX
Dodds, R. N.....	XIV	Rush Medical College.....	X
Fairchild Bros. & Foster.....	X	Sharp & Smith	XIII
Fanshawe Handecker Apron Co	XVIII	Springfield Mattress Co	IX
Fellows Syr. Hypophos. Co.....	XIX	Truax Green & Co	XIII
Finsen Light Inst., Chicago	V	Victor Electric Co	XII
Gardner Barada Co	II	Wagner R. V. & Co	XVIII
Herzog Laboratory	XIV	Western X-Ray & Coil Co	XI
Illinois Central R. R. Co	XVII	Whitford, Wm. Medical Stenographer	XVIII
Illinois State Journal Co.....	XIV		

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Some Improvements in the Method of Local Analgesia.

A clinical lecture with the above title, delivered at University College Hospital, London, July 11, 1903, by Arthur E. J. Barker, F. R. C. S., Eng., appears in The Lancet for July 25, 1903.

Several points must be borne in mind, among them the mechanical and physical difficulties in infiltrating all the nerves supplying an extensive field of operation. To inject the whole area so as to reach all its nerves would mean in many cases the use of much more of the toxic drug than is necessary, and in some cases so much as to be dangerous.

The author refers to certain observations by Braun, of Leipsic, on a method of overcoming the drawbacks incident to the usual mode of producing local anesthesia. This method is based upon the old experience that anything which retards or diminishes the circulation of the blood in a part enhances the potency of the analgesic agent. Experiments were made with Adrenalin, a very small quantity of which was injected with B-eucaine (or cocaine) into the author's own arm, and subsequently into the arms of numerous patients. After the lapse of twenty minutes the part was quite blanched and wholly insensitive to pain, remaining so for about two hours. Adrenalin, alone, used in this way had no analgesic effect, while the results of the use

of the combined solutions of B-eucaine and Adrenalin were far superior to those produced by B-eucaine alone.

The most convenient way to prepare the solution is as follows: Powders each containing 0.2 gramme (3 grains) of B-eucaine and 0.8 gramme (12 grains) of pure sodium chloride are kept in thick glazed paper, ready for use. When needed one powder is dissolved in 100 c.c. (3½ fluid ounces) of boiling distilled water, and 1 c.c. of Parke, Davis & Co.'s Solution Adrenalin Chloride is added when the fluid is cool. The solution is left in the Jena glass beaker in which it has been boiled, which is carefully covered and placed in a vessel of warm water to keep it at blood heat.

The injection is made by means of a simple syringe of glass and metal of 10 c.c. capacity, with rubber washers, which can be sterilized by boiling.

To illustrate his method the author describes in detail the performance of an operation for the radical cure of inguinal hernia. The hernia is first reduced and the index finger is thrust into the external ring as far as possible. Along this finger the needle is entered and the inguinal canal is filled with 10 c.c. of the solution. An endeavor is made to inject it all around the neck of the sac so as to reach the genital branch of the genito-crural nerve. The needle is then entered at the external end of the line of incision in the skin, and is made to infiltrate the

superficial layers of the latter down to the root of the scrotum, making the resulting wheal at least an inch longer at each end than the incision is to be. Injections are then made at a point half an inch to the inner side of the anterior superior spine of the ilium, the needle being thrust towards the ilio-inguinal nerve, and at a point about one inch above the middle of Poupart's ligament where the ilio-hypogastric nerve is most conveniently met. Then the thigh is flexed and another syringeful is injected along the ramus of the pubis and the root of the scrotum or labium.

It is necessary to wait twenty minutes after the last injection for the full effect of the Adrenalin to develop. The whole field of operation should be blanched and insensitive to pricks but not to touch—analgesia, not anesthesia. The incision may then be made with confidence that no pain will be felt. The absence of oozing of blood is noticed. Only large vessels bleed at all.

Success depends upon a mastery of the principles, and practice in the details of the method. It is not enough to inject the fluid under the skin generally. Due regard must be had to the position and course of the nerves supplying the structures to be dealt with. The Adrenalin compound, by slowing the circulation through the part prevents the anesthetic agent from being rapidly washed away. The writer has used this method in thirty operations including the radical cure of hernia, strangulated hernia, orchidectomy, removal of varicose veins, psoas abscess, loose body in knee, tumor of neck (actinomycosis), colotomy, Thiersch skin grafting, and cystic adenoma of the thyroid.

"As a non-conductor of heat Antiphlogistine maintains the degree of temperature at which it is applied or nearly so, for 12 to 24 hours, requires no attention whatsoever and is in every way pleasant and agreeable."

"The treatment of inflammation through the medium of Antiphlogistine has the endorsement of every active practitioner as the most approved method of curative procedure."

Sanitary Conditions in the Philippines.

A glimpse at the sanitary conditions prevailing in Manila, Philippine Islands, is furnished by the following extract from the report of the Commissioner of Public Health, Major Carter issued June 20, 1903:

"The death rate during the month of May, 1903, was 30.02; a considerable increase over that for the month of April, which was 22.12, but much less than that for the month of May a year ago, when the rate was 65.81. The increase for the present month was due almost wholly to a sudden rise in the number of cases of cholera, there being a total of 230 cases. The type of the disease was also severe, as of the above cases 212 ultimately died, giving a case mortality of 92.17 per cent. In the month of January there were 7 cases; in February, 2; in March, 5; in April, 32. The rise in the latter part of April and during May was not unanticipated, as the general history of cholera epi-

demics in the Tropics shows a sharp increase in the number of cases coincident with the beginning of the rains, when any infectious material on the ground surface or in shallow vaults, which local conditions may have rendered temporarily harmless so far as conveying disease is concerned, is washed by rains into the water courses and perhaps widely spread through a general source of water supply. The outbreak of May occurred under such conditions. It was noteworthy that the greater part of those who contracted cholera were boatmen, laundresses, fishermen, and others whose occupations brought them into close contact with the Pasig River and certain esteros. A large proportion of the cases occurred in districts along the river and the most contaminated esteros. In these districts an unduly high proportion of cases occurred on boats, and this was particularly true of boats moored in certain backwater reaches relatively little affected by tides. Thus, 63 of the total of 230 cases for the entire city occurred in San Nicolas district, and largely on boats moored in the vicinity of the custom-house and quay near the office of the Captain of the Port. The natives themselves were inclined to attribute the cholera to the use of infected foods purchased in the Divisoria Market, but the distribution of the disease through the city was such as to render this unlikely. A number of samples of water taken from the backwaters and eddies of the Pasig River were examined by medical officers of the Quarantine Service, and the presence of cholera germs in large numbers was determined. This work was checked by officials of the Board of Health and the results previously obtained were fully confirmed, the greatest intensity of river-water infection being demonstrated in samples taken from the slack-water anchorages where the greatest number of cases had occurred on boats. This was the more readily to be understood from the fact that the cholera cases were frequently not found for some time; bodies dead of cholera were not rarely weighted and disposed of by being thrown into the river, and in any event the cholera discharges soon found their way overboard to still further contaminate an already infected water. This water was backed up by the rising tide into the esteros and the infection was thus conveyed to other quarters of the city. The boat population could not be prevented from using this water for domestic purposes, and where the cause was attributed to infected food purchased in the Divisoria Market it was frequently found that such food had been subsequently washed in river water and thus probably become infected after purchase. The Board of Health met the situation by increased vigilance with respect to sanitary inspection, more stringent oversight over the markets, and by the issue, on May 22, of 30,000 circulars printed in Tagalog and 5,000 in Chinese, concisely stating in simple language the most important sanitary rules for the prevention of cholera. Within the next few days a copy of this circular was posted in every house and on every inhabited water craft in the city. A considerable decrease of cholera was soon apparent as a result of these special efforts. While in the two weeks—May 8 to 22—there had oc-

curred 129 cases of cholera, in the two subsequent weeks—May 23 to June 6—there were but 83 cases, and by the end of the first week in June the outbreak was well under control and the cases were few and scattering. During the outbreak of this month more than twice as many males died of cholera as females, and of the 194 deaths reported only 12 occurred in children under the age of 15 years. By far the greatest mortality from cholera occurred in the class between the ages of 25 and 30 years, 41 deaths occurring during this period of life.

During the month of May there was a gratifying falling off in the number of plague infections, there being but 27 cases and 23 deaths (one in a transient), as compared with 52 cases and 49 deaths for the previous month. This decrease was apparently in direct response to the special efforts put forth by the Board of Health, including the destruction of plague houses, rat catching, and, of most importance, the general inoculation of the Chinese with Shiga's antiseptic prophylactic virus, which was begun during the month. There were 10,051 rats reported as destroyed during the month, and of those examined post-mortem for plague none were found to be so affected, as compared with about 1 per cent found diseased during the previous month. It is not fairly to be expected that any large proportion of the rat population will ever be found to be affected with plague at any one time, for the reason that the plague rats not only soon die from the disease but are sick animals whose impaired appetites do not tempt them to destruction by baited traps or poison. For these reasons the true proportion of the rat population affected with plague may be considered as being somewhat in excess of the proportion of the captured rats which may be found to be affected with the disease.

There were 21 cases of smallpox, with 2 deaths, during the month.

Summarizing the general sanitary work of the Board of Health during the month, it may be mentioned that the total number of inspections and reinspections of houses amounted to 204,277, and of casks and other water craft to 2,480. There were 19,854 houses cleaned as a result of sanitary orders, and 431 painted or whitewashed; 649 houses and 22 water craft were disinfected. A total of 15,410 yards were cleaned, repaved, or repaired, and the contents of 2,470 cesspools and vaults were removed.

During the month 672 sanitary orders were issued, of which 350 were complied with, and proceedings in 17 instances were pending in the courts. A total of 7,598 animals were inspected on arrival at the port; 8,212 were inspected at the abattoir, of which number 21 were condemned. The crematories disposed of 15,543 dead animals and birds, which number included 9,143 rats, and, in addition, 2,121 loads of refuse were burned. The excessive number of animals requiring disposal was due to the loss of animal life in the Santa Cruz fire. There were 17,432 persons vaccinated in the city of Manila, and

125,725 units of vaccine virus issued for use throughout the Islands.

"Expectation becomes realization in all cases of localized inflammation where Antiphlogistine is applied."

The Clinic Publishing Company, Ravenswood Station, Chicago, are making a special drive on two volumes published by them. "Stories of a Country Doctor," and "Recollections of a Rebel Surgeon," are two books that every doctor will want to add to his library. The wit, pathos, anecdote and personal experience will appeal to the heart of every brother in the profession. The tales are told with a spontaneous, brilliant style of expression, and the interest is quickened and held from first to last. Don't fail to take advantage of our special offer: The two books, bound in cloth, for only \$1.00.

"Antiphlogistine renders ready service to the patient and physician by promptness and positiveness of action."

"For therapeutic efficiency in rapid resolution of the products of inflammation. Antiphlogistine is unexcelled."

ORGANIC IRON MEDICATION IN SECONDARY ANAEMIAS.

A Clinical and Hematological Study.

By Lino S. Chibas, M. D., senior assistant house physician, Columbus Hospital, New York, and G. A. De Santos Saxe, M. D., assistant pathologist to the Columbus Hospital, New York.

A great deal has been written in recent years on the value of the various new organic iron compounds in the treatment of anaemia, and our only excuse for the presentation of this report is that every new series of clinical observations, made with due conservatism and accurately recorded, is of value in confirming or disproving some fact or theory in medicine.

The problem of treating secondary anaemias is an interesting one. In each case there is, in the first place, the primary factor, be it loss of blood through hemorrhage, spontaneous or traumatic; or be it the lowering of the functional activity of the blood-forming organs wrought by disease somewhere in the body, or by the action of toxins; or the direct destruction of the red cells and their hemoglobin in the circulating blood by some more violent toxic agency.

The first question, therefore, is how to remove the primary factor, or, at least, how to arrest its influence on the state of the blood. The second is, how to improve the state of the blood, so as to give it a new lease of life by increasing the amount of hemoglobin—that prime agent of oxygen exchange—and the number of red cells, the carriers of this agent.

In each individual case of secondary anaemia there are different obstacles to be overcome as regards the primary factor, and therefore the treatment of the primary disease varies; but the therapy of the secondary condition is alike in

all cases. Iron and its assistant, manganese, are the specifics to which we must have recourse—of that there has long since been no doubt—but the form of iron that should be used for this purpose is another question.

The problem as to the exact site and mode of absorption of iron which is administered therapeutically has occupied pharmacologists for a number of years, and a great deal has been written on the subject, and yet, there is still no agreement even as regards some of the essential points of this question. Is iron absorbed at all in the inorganic state? If so, in what form and in what quantities? What form of iron is most readily absorbed? How does iron act if it is not absorbed, or if only infinitesimal amounts, totally inadequate for the needs of the body, enter the plasma and are taken up by the molecules of hemoglobin? All these questions have been discussed and rediscussed, but as yet, as Hammarsten says: "The action of the iron salts is obscure."

In a clinical article we are not called upon to go into details in discussing the various phases of the question as to the absorption and mode of action of the iron salts, but a few words may be said to show the present status of the subject.

Whether iron compounds of the inorganic group are absorbed at all, is a question of subsidiary interests in the present inquiry. There are two diametrically opposite views on this question. Bunge and his pupils say that inorganic iron salts are not absorbed in any amount, however small, and that Bland's pills and similar preparations act only by combining with the hydrogen sulphide and the alkaline sulphides of the intestine, thus preventing the decomposition of the organic compounds of iron existing in our food, especially in vegetables, and so permitting the absorption of these compounds into the blood. The opposite view is held by Quincke and others, but the balance of evidence is in favor of Bunge's hypothesis. The wellknown fact that enormous doses of iron are required to produce appreciable effects in chlorosis supports this theory. Thus, if a woman takes six grains of reduced iron three times a day (eighteen grains daily), it will take weeks to restore her to the normal condition if her hemoglobin has fallen to 50 per cent. And yet, the entire amount of iron in the blood of a normal woman of average weight is only thirty grains, so that if the inorganic iron were absorbed, as some observers claim, a few days would suffice to restore the balance of hemoglobin and red cells.

On the other hand, organic iron compounds, especially such as are composed of iron with a proteid substance that resembles as closely as possible the proteids of the food as they occur in the intestine (e. g., peptones), are undoubtedly absorbed into the blood in sufficient amounts to produce a comparatively speedy therapeutic effect in anaemia, without injuring, as the inorganic compounds often do, the epithelial covering of the stomach and intestine, and thus causing gastro-intestinal symptoms sum-

marized under the two general headings of dyspepsia and constipation.

It is these advantages that led to the general adoption of the iron peptonates, albuminates, etc., as the remedies to be preferred in the treatment of anaemia. In this report we deal with one of these preparations, that known as pepto-mangan, Gude, in which iron and manganese exist in the form of peptonates. Gude's pepto-mangan has been used for a long time at the Columbus Hospital as a matter of routine in all anaemic patients during convalescence from prolonged illness or from operations. The satisfactory results which have been obtained with this preparation have been noted, in a general way, by the visiting staff as well as by the house physicians, but until now we had made no study of the exact results, as attested by the examination of the blood before and after the initiation of the treatment.

In order to determine more accurately what could be expected of pepto-mangan in secondary anaemias as they occur in a general hospital, we studied a number of cases in the medical, surgical and gynecological wards. Of these a majority were in the services of Drs. Ramon Guiteras and Egbert H. Grandin, visiting surgeon and visiting gynecologist to the hospital, and take this opportunity to acknowledge their courtesy in permitting us to pursue this work.

About forty cases were studied from October 1, 1902, to March 1, 1903, in as thorough manner as possible, with a view of determining the action of the preparation to be tested. Unfortunately, for reasons beyond our control, a great many of these patients left the hospital, believing themselves sufficiently improved, without giving us time to try the remedy for a sufficient period to obtain definite results. We present, however, twelve cases in which the medication, pepto-mangan (Gude) in tablespoonful doses, was continued for three or more weeks, usually for about a month in each instance. In each of these cases blood-counts were made before beginning the treatment, as well as after it had been discontinued. The cases all showed remarkable improvement in the color index and in the number of blood corpuscles.

On reviewing the results obtained, we find that, considering the diversity of cases studied under the influence of pepto-mangan, the ratio of increase in the hemoglobin and red cells was very uniform. In one case only of the twelve studied in detail, there was no improvement noted in the anaemia, and that was a hopeless case of tuberculous peritonitis, in which, however, the patient was discharged improved as regards her abdominal symptoms after operation. In another case the improvement was but slight, but this was a patient with renal tumor, and a marked cachexia. These two cases were as severe tests as an iron preparation could be subjected to, and perhaps the paucity of the results is not to be wondered at in these instances.

In the remaining ten cases reported here, as the table shows, the results were very satisfactory for the short duration of the treatment. There is no question that a few weeks longer would have brought most of the "improved"

cases up to the point where we could say that the anaemia was "cured." But unfortunately our patients belonged to a class in which every day spent in a hospital counts in privations for others who depend upon them, and we have been often obliged, upon the insistent demands of the patients and their friends, to discharge the convalescents at the earliest possible date.

In addition to the forty-odd cases which we studied this winter, pepto-mangan has been used in the hospital for over two years in anaemic convalescents, with uniformly satisfactory results. In none of the cases under our observation did any untoward symptoms accompany or follow the use of this preparation. In no case did constipation, nausea, headache, or digestive difficulties follow its administration.

The results recorded here correspond with those obtained with the use of pepto-mangan by Loomis, Van Schaick, and von Ramdohr, of New York; Peterson, Perekham, Doehring, of Chicago; Wolffe, of Philadelphia; Summa and Bauduy of St. Louis; Von Ruck, of Asheville, N. C.; McGuire, of Richmond, Va.; Frieser and Pohl, of Vienna, and Fasano, of Naples.

On the whole, therefore, we have found pepto-mangan a very satisfactory and efficient hematinic in secondary anaemias.

"Extension of the septic products along the vascular highways is prevented by the use of Antiphlogistine."

"The abstraction of blood from the deep blood-vessels into the superficial capillaries through physiologic innervation is physiologic phlebotomy—bleed, but save the blood—is the mechanics of Antiphlogistine."

Hydroleine as a Tissue Builder.

By W. Harper Sloan, M. D., chief of Ear Department Medico-Chirurgical Hospital, Philadelphia, Pa.

Every physician has at some time in his professional career, become discouraged in his inability to treat successfully cases of malnutrition, wasting diseases, and kindred ailments that failed to respond to the ordinary tonic treatment so much in vogue among us.

I would invariably place my patients suffering from debility, bronchitis, and all diseases of a wasting nature, on a system of tonic treatment, which I found gave me uncertain results, and in looking about for an improvement on the old method of temporary stimulation, I was led to give Hydroleine a fair and impartial trial. The results obtained were so encouraging that I have learned to trust it in all my cases where I desire a permanent tissue builder and reconstructive. I find that it is agreeable to the patient, well borne by the stomach, and the only combination containing cod-liver oil that does not produce unpleasant eructations, so objectionable in most cod-liver oil preparations. It is a pancreatized, predigested oil, giving no extra work to the digestive apparatus, being ready for alimentionation as soon as ingested.

Case 1. Mrs. C., age thirty-five years. Came under my care about six months ago, suffering from chronic bronchitis. She stated that she had been a sufferer for years, had been under the

care of several eminent physicians, having received only temporary relief. She had lost her appetite, could not sleep, was very weak and nervous; after a paroxysm of coughing she would be compelled to lie down, so marked was the prostration. I started her on the ordinary treatment consisting of expectorants, sedatives, internally, to act on the bronchial mucous membrane. I gave her the proper instructions in regard to diet, clothing, etc., which I have reason to believe she obeyed faithfully. After a week's treatment the lady informed me she saw no improvement at all. I, therefore, concluded it was time to change my tactics, which I did. I ordered her to stop her medicine, and prescribed Hydroleine, directing her to take a tablespoonful four times a day. In the course of two weeks I noticed a marked improvement; the cough had lessened, she slept better, and she expectorated very freely, which was a source of great relief to her; and from that time there was a gradual and steady improvement in her condition. I kept her under observation for nearly four months, when I discharged her. She is enjoying better health now than she has for years. She keeps Hydroleine on hand, taking it occasionally.

Case 2. Miss H., aged sixty years, had been a sufferer for years with a pulmonary affection that had been diagnosed as tuberculosis in her early life. She informed me that she had had several hemorrhages from the lungs. When she came under my care she was profoundly anaemic and debilitated, suffering with cough, but could not expectorate. Temperature was normal, pulse somewhat quick; respirations were increased; marked dyspnoea. I ordered cod-liver oil (emulsion) at her first visit; but she informed me that her stomach would not stand the most palatable emulsion, as she had tried them many times. I then ordered Hydroleine, which proved satisfactory to both the patient and myself. The cough lessened, her strength gradually returned, and, much to my surprise there was no gastric disturbance, which was due entirely to the pancreatin and soda bi-carb. that Hydroleine contains.

Case 3. Horace F., age eight years, came under my care suffering with chronic otorrhea, which at its best is a stubborn affection to deal with. It had followed scarlet fever two years previous. The boy was naturally depressed and anaemic from the continued destruction of white blood corpuscles. I instituted the regular treatment, which met with varying results. He would improve for a few days; then the discharge of pus would reappear with profusion. I here determined to reinforce the blood-supply, concluding that if I could increase and strengthen the corpuscular elements of the blood, I would be better able to control the pus germ that was developing so rapidly. I could think of no better reconstructive than Hydroleine which I ordered him to take. At first he objected to the taste of the preparation, but this was gradually overcome, after which he took it without objection. It was well borne by the stomach, and the patient's general condition improved, while the discharge lessened, and I expect to discharge him as cured in another week's time.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 7. }

Springfield, Ill., December, 1903.

{ SUBSCRIPTION
{ \$3.00 A YEAR.

CHOREA.*

BY L. HARRISON METTLER, A. M., M. D.,
CHICAGO.

Professor of Mental and Nervous Diseases in the Chicago
Clinical School; Associate Professor of Neurology
in the College of Medicine of the State
University of Illinois.

In his popular journal, *Amiel*, a keen observer of human nature and one who has had much to do with physicians asks, "Why do doctors so often make mistakes? Because they are not sufficiently individual in their diagnosis or their treatment. They class a sick man under some given department of their nosology, whereas every invalid is really a special case, a unique example. * * * How is it possible that so coarse a method of sifting should produce judicious therapeutics?"

It is good for us to see ourselves sometimes as others see us. If, however, we should feel inclined to resent the above criticism as coming from a layman, let us note what Oppenheim says in his recent work upon the diseases of the nervous system. "Under the name Chorea are included many different disease conditions. As these disease forms are, excluding this symptom, of a heterogeneous nature, a sharp differentiation between them is demanded."

My excuse for bringing this subject before you is that I believe this sharp differentiation between the choreas, even between the sub-varieties of chorea minor, is not often enough made and hence the uncertain and variable results obtained in treatment. I have long observed how dissimilar are the opinions among general practitioners in regard to the successful treatment of chorea. Some hold that there is no treatment for the disease; that in reality it is a self-limited affection, and that recovery takes place in spite of the treatment. Others maintain on the contrary that arsenic is all but a specific

in chorea. They use this remedy in almost all of their cases until the habit becomes a routine; consequently they often obtain most discouraging cases and results. Finally, not a few assert that the disease is rarely if ever cured; for, as they argue, it so frequently and periodically relapses; a fact which proves that the mere choreiform symptom, the jaetitations, have been overcome but not the disease itself.

I believe that much of this confusion and diversity of opinion in regard to the successful management of chorea is due to the failure to make a sharp differentiation between the various forms of the disease. I am not referring now solely to the differentiation between such obviously dissimilar affections as so called hereditary chorea, hysterical chorea, post- and pre-hemiplegic chorea, habit chorea, the choreiform movements accompanying the various sclerotic and degenerative conditions like Friedreich's Ataxia, the birth palsies, etc., the reflex choreas and the various ties of the French writers. These are all distinct and separate affections, easily diagnosed; and yet in regard to the choreic manifestation bear a sort of relationship to ordinary chorea.

It is in regard to this ordinary, acute, or minor chorea that I wish to call your attention and if possible point out some elements of differentiation that may go far towards indicating a successful line of therapy. I will in passing make the briefest possible report of a few cases by way of illustration.

Charles H., aged 13; mother decidedly neurotic; father a heavy smoker and drinker. Brothers and sisters all well. No history of rheumatism, no signs of present heart trouble. The patient had had no other disease and appeared to be a well-developed lad. A most thorough physical examination failed to reveal any cause, reflex or otherwise, for the chorea. And yet the twitchings were violent and typical in the face, arms and

*Read at 53d Annual Meeting, Chicago, May 30, 1903

legs. Rapid recovery took place under increasing doses of Fowler's solution. This was obviously a simple case of Sydenham's disease and I report it merely for the sake of comparison with the following case.

Maggie L., aged 10; without special heredity; and without any present sign of other disease. About a year before coming under my care, the child was bribed by a man who attempted to rape her. He was frightened away before he had done any physical damage but the child was profoundly shocked and terrified. In a week or two she developed a typical generalized chorea of a most severe form. Gradually the jactitations abated but they have never entirely disappeared. This spring they returned with all their old vigor. The child is noticeably duller than her sisters; seems to have very little power of application; and is sheepish and highly emotional in manner. Physically she is exhausted from the constant jactitations and the want of sleep, the movements being active during the night though not as much so as during the day. She complains much of headache. Mental shock and fright are undoubtedly causes of chorea—causes which awaken some doubt as to the alleged organic and toxæmic explanation of the disease.

Mircoli¹ defines chorea as "a disorder of the motor-sensory and psychical spheres resulting from an irritation, or possibly from an inhibition of various nervous elements and functions." He says that Murri was the first to recognize the clinical unity of the ties, polymyoclonias, and choreas. Mircoli himself does not believe that we ought to separate epilepsy and paralysis agitans from this group of diseases. He points out that both epilepsy and chorea are sometimes started by fright. By way of illustration he cites two cases; both started from a sudden fright caused by a large savage dog. The one whose parentage and heredity were perfectly healthy, developed a typical epilepsy; the other, whose parentage was syphilitic developed an equally typical chorea. This group of diseases may be the result of an

irritation provoked by an autointoxication with the poisons of rheumatism or by parasites that enter from without. "The only division between chorea and epilepsy is that which can be made upon the basis of etiology."

The lesions vary all the way from a severe encephalitis and myelitis to alterations of the central nervous system that are scarcely observable with our present means of investigation. Mircoli has undoubtedly represented the more modern conception of this large group of diseases of which certain muscular jactitations constitute the most prominent symptom and in so doing has indicated what we have long contended that the etiology and pathology should be made the basis of their nomenclature and differentiation rather than the mere symptom of the muscular movements.²

Alma P., aged 11; no special heredity; parentage German; no history of rheumatism; no signs of endocarditis. Has had measles, diphtheria and scarlatina. According to the mother, the child has always been nervous and quick-tempered. Mentally she is somewhat sluggish and physically she reveals some of the stigmata of degeneracy. Four months before coming under observation she had had a fight with a boy. A hemichorea, involving more particularly the left half of the body, developed and has come and gone ever since in spells. The movements are somewhat more rhythmical than are those of an ordinary generalized chorea. They are not long in duration though at times they are quite vigorous. And they exhibit a certain degree of periodicity in their appearance. About the time of their appearance, the child manifests an exalted degree of emotionalism; complains of bad feeling in the stomach without distinct globus; and speaks of a typical vertex headache like that of hysterical clonus. During the spell there is considerable difficulty of speech, left-sided numbness and a temporary blurring of the vision. The urinary secretion is excessive after the spell. In a word the symptoms are

¹ *Gazzetta degli ospedali e delle cliniche*, Feb. 1st. Quoted from *N. Y. Medical Journal*, April 11, 1903.

² Vid. Mettler, *The Treatment of Choreia*, *Merck's Archives*, June, 1903; Vid. Mettler, *Syphilis as a Cause of Choreia*, *American Journal of the Medical Sciences*, September, 1903.

those of hysterical chorea or more accurately hysteria with choreiform movements.

Henry P., aged 11; German parentage; victim of hereditary syphilis. The father contracted syphilis ten years before marriage; has been in the Insane Asylum, but is now living at home, a sad spectacle of general dementia with paresis, irresponsible, harmless and foolish. The mother is free from disease. There are three other living children, all of whom reveal typical indications of inherited syphilis.

As this case will be reported in full in the American Journal of the Medical Sciences, I note it here merely on account of its typical choreiform manifestations. The case was really a case of syphilis and responded to antisiphilitic treatment.

These cases were all at one time diagnosed as chorea and yet how different were their history and etiology! This observation leads up to my first contention, namely: that chorea is most emphatically not a disease but a mere symptom. Much of our confusion in regard to the nature and management of so called chorea has its origin, I believe, in our attempt to classify chorea minor as a "definite, substantive affection" (Osler) or "a distinct malady showing varying degrees of permanence and intensity" (Dana). Had the choreiform manifestations been made less of in each of the cases cited they would have been more promptly recognized as cases of syphilis, hysteria, traumatic neurosis and treated accordingly. As Amiel says, we are all too prone to classify our cases under some given department of nosology instead of regarding every case as a special and unique example.

The term *chorea*, representing as it does a mere symptom, should be relegated to the position now occupied by the word *paralysis*. Because choreic movements occur more frequently in connection with some causes, especially when, as we will discover upon close examination, other symptoms occur along with the jactitations, we are not thereby justified in tacking the name of the one single symptom to the whole group and calling it a distinct, substantive affection. The naming of diseases after one or more prom-

inent symptoms has long been the bane of medicine and has not a little hindered the diffusion of a proper knowledge of the disease. This is not a mere quibble about words. It involves a principle and its thorough recognition will go far towards provoking more careful diagnosis and therapeutics. Recall, if you please, the list of causes said to produce this "distinct, substantive" affection chorea minor. Here are a few of them: heredity, zymotic fever, typhoid fever, onanism, overstudy, fright, saturnism, epilepsy, traumatism, malaria, tobacco, intestinal irritation, phimosis, eye-strain, imitation, hysteria, malnutrition, rheumatism, endocarditis, anaemia, syphilis, gonorrhoea, etc., etc. Is it any wonder, if all these various and diverse causes are assumed to be able to give rise to a simple, uniform, distinct, substantive affection, that we obtain such variable and often unsatisfactory results in the treatment of chorea!

Another source of confusion and another cause, as I believe, for the disappointment in the treatment of chorea minor is the over-importance which we attach to the motor symptoms in the general symptomatology. Sensory, mental and even trophic symptoms play not unfrequently a prominent role and if earnestly sought for will be found more or less present in every case. True, chorea is a motor phenomenon; but the motor phenomena do not constitute the disease. Other neurons beside those of the motor tracts are more or less involved. The pains of chorea, a sensory manifestation, are too often mistaken for and diagnosed as rheumatism.

Gertrude R., aged 9; nothing special in the history. Mother and sister are neurotic. The patient has suffered from mild, generalized chorea, typical in character, on and off, for the last two years. The attacks are always worse in the Spring and Fall. Their origin is obscure. The jactitations are so severe at times that walking and the use of the arms are quite impossible. The patient has never had rheumatism, nor are there any signs of endocarditis. And yet she complains during the exacerbations of her trouble, of irregular, indefinite, darting, rheumatoid pains all over the body. The pains and jacti-

tations gradually disappeared under increasing dosage of Fowler's solution. Psychic manifestations are much more common even than the pains. Dullness, apathy, listlessness, slight amnesia, failure in the power of attention, all interfering with the child's progress in school are often very noticeable. The child is unwarrantably punished for being more stupid than his fellows. This irritates and depresses the nervous system, increasing the very condition which originally brought about the apparent mental apathy. On the other hand extreme irritability, restlessness and emotionalism are sometimes present. These sometimes assume a hysterical character. I have a number of cases in which all these mental manifestations have been very pronounced.

Some varieties of stuttering are without doubt closely related to chorea. The following case is suggestive:

Lawrence Q., aged 12; has stuttered more or less since he was three years of age. His mother declares it is always worse when he has taken "cold." The lad is well developed and exhibits no hysteroid tendencies. There are no apparent physical defects to account for the trouble and he can control his speech when he puts his attention closely upon it. Fowler's solution in gradually increasing doses was administered. Appropriate educational and disciplinary treatment was also recommended. After some week's disappearance from observation, during which time the arsenic had been stopped and resumed occasionally, the boy returned and volunteered the information that while he took the medicine the stuttering stopped almost entirely but returned again as soon as the medicine was omitted. All forms of habit chorea are best managed by moral and disciplinary methods aided by tonics and mental suggestion.

Amenorrhoea and other menstrual disturbances are occasionally associated with the choreic symptoms.

Mary C., aged 16; history unimportant; complained of rheumatic pains all last winter and shows that she is the victim of the uric diathesis. In the Spring she developed a severe attack of typical, generalized chorea.

There are no heart symptoms. A very slight menstruation occurred about a year ago but has never reappeared. Dr. C. W. Barrett kindly examined the pelvic organs for me and found the uterus exceedingly small and undeveloped. He offered no hope of improvement in regard to the condition of the uterus and told me that he had often observed choreiform manifestations with such a condition of the pelvic organs.

The prognosis of chorea minor or indeed of any of the choreas, cannot be foretold from the character of the manifestations. It is dependent upon the underlying causation. The closest study of the manifestations alone will not assist us in determining the cause, nature or prognosis of the trouble. These may be extremely violent and yet complete recovery take place in a very short time. One of my patients was often thrown violently out of bed but he made a remarkably rapid and complete recovery. On the other hand the jerks may be very slight and hardly noticeable, and yet on account of the mental depression, the cardiac trouble or other factors, relapses will constantly occur and the disease seem to be almost intractable. Death has even occurred when the manifestations were quite insignificant. Hence from the standpoint of prognosis, chorea is shown to be a singularly variable and uncertain trouble and in its various forms to demand always a most careful differential diagnosis.

As a corollary to all this, the treatment of each case should be sharply individualized if the best results are to be obtained. I suspect that the too close attention to the mere motor symptom of chorea minor and the frequent improvement of this symptom under the administration of arsenic, have led largely to the notion that this particular form of chorea is a distinct substantive disease, with a pathology more or less uniform and a line of treatment more or less limited and fixed. Undoubtedly a certain percentage of cases of chorea minor are benefited by the arsenic treatment but it is not very easy to decide as to how much credit is to be given to the medication, in view of the fact that it is so seldom employed to the exclusion of all other measures. Chorea minor is more or less of a

self-limited disease and not unfrequently disappears without any treatment or at most with a mere change of environment. I had recently a very obstinate case in quite a young child that got well very rapidly as soon as I had the child taken into the country away from its older brothers and sisters.

The cases that are treated with arsenic not unfrequently relapse, showing that the disease itself, whatever it may be, functional or organic, is not really overcome. In my opinion, arsenic acts in this disease not as a specific but merely as a superior nerve tonic. It seems to be indicated most in those cases wherein strain, shock, toxæmia and other general debilitating influences have been at work. Rest, isolation, change of habits, relief from all nervous tension, with the use of a good, non-stimulating diet are so generally added to the arsenic treatment, that one cannot say offhand in any such case that the latter and not the former, played the principal role in effecting the cure. At all events the arsenic plus the general measures just enumerated obtains its happiest results in that very class of cases best entitled to the name of functional neurosis. This remedy is futile of course in those choreas of a distinctly reflex or organic origin. In these no treatment will avail but that which is known to combat the underlying etiological and pathological factors as for example mercury and the iodides in syphilitic chorea, surgery in the reflex chorea from phimosis or post-nasal adenoids, and psychic and disciplinary treatment in the hysterical choreas.

In conclusion I would submit that:

1. Chorea is not a disease but always one of a group of symptoms which symptoms may be due to various etiological and pathological conditions.

2. It is due to some irritative factor and thus far is the same in all of its varied manifestations.

3. The differences between the various choreas depend not so much upon the choreic movements, as these vary merely in place and degree; but upon the associated symptoms of the trouble or disease in which the choreiform phenomena form one symptom.

4. This is proved logically and is sufficiently demonstrable when one observes carefully the etiology, symptoms, prognosis and treatment of every case.

5. This is the only way to look upon chorea, in order to comprehend the trouble in its truest light and to make a correct diagnosis and to apply the most hopeful line of treatment.

Discussion.

J. W. Hensley, Peoria: I wish to make a few remarks on the doctor's essay. His principal point is that chorea is only a symptom. That is the case in a great many instances in our nomenclature, but if chorea is only a symptom it would surely add a great many more terms to our already vast and stupendous nomenclature to attempt to signify or describe it in various other terms. My experience with chorea is a great deal in accord with what I know is the position that many take; that there seems to be quite generally in these cases some connection with rheumatism, and that the disease occurs more frequently in the adolescent and especially in girls. Further, outside of the usual forms it appears to be connected with the nervous system and I have for sometime been inclined to the opinion that, as a rule, there is a rheumatic condition of the nervous system; at least that is true in many of the conditions that I have met.

The fact that there is a tendency to relapses in chorea does not disprove that the disease is self-limiting, nor that it is cured by nature, nor that it cures itself. That has not been my experience. Of course, the doctor is perfectly correct when he takes the ground that we should very carefully trace the causes of the trouble and strike at the seat of the trouble. That, of course, we will do. The old treatment is the arsenic treatment. Arsenic is one of the greatest tonics we have in our materia medica, especially a nerve tonic. But where there is a rheumatic condition the arsenic will not take hold very rapidly; it is then a slow treatment; it is slow in its constitutional effects, but nevertheless, I think that, as a rule, we should give it in every case of chorea. The combination of arsenic and gold is to be preferred as a continuous treatment for chorea; the Barkley method or Arsenaurol.

Cimicifuga, or Black Cohosh, is a grand remedy in the cases of girls or boys who become affected with this nervous phenomenon of the simpler kind and also where the agitation is considerable at night while the patient is asleep. I do not think that there is anything superior to antipyrin, especially in choreas with a rheumatic basis. Giving it continuously for days or weeks I have not found in a single instance that it does any harm in the way of depressing the heart.

The doctor has brought out many valuable points that should be of interest as chorea is a disease we all meet so frequently; more so, perhaps, at this time than in years past because of the more general prevalence of nervous affections today than then.

OVARIAN DYSMENORRHOEA—ITS TREATMENT BY A NEW OPERATION.*

BY NORMAN KERR, M. D., CHICAGO.

"The true significance of menstruation still remains among the unsolved problems of medicine," are the words used in the beginning of an article by Helen MacMurchy, of Toronto, and the same words with ovarian dysmenorrhoea substituted for menstruation might be used in connection with this paper, as will probably be shown by the varying opinions expressed by different authorities.

Engelmann's well known figures in a series of 5000 women show that 66 to 70 per cent suffer more or less pain during menstruation, and Jacobi's figures of 65 per cent in a series of 100 cases show at least that a large percentage of women suffer from dysmenorrhoea of one form or another, but the percentage of these sufferers who are afflicted with painful conditions of purely ovarian or periovarian origin has never been estimated, at least so far as the writer has been able to determine from a review of the literature on the subject.

It will not be attempted in this article to deal with the subject of dysmenorrhoea which has its origin in the uterus, because the literature on this is already very voluminous.

Garrigues in his Text Book on Diseases of Women in Chapt VI of Part VI, says, "The ovary may be the seat of neuralgia. In most cases this forms only part of hysteria, but the disease may be found in women who show no other symptoms of that affection." It may be of malarial origin. The left ovary is affected much more frequently than the right, for which circumstances we may find an explanation in its contact with the rectum, the contents of which are apt to press on the ovary on this side, or the different disposition and construction of the ovarian vein in that it has no valves and empties into the renal vein at right angles to it.

He also states that dysmenorrhoea sometimes seems to be due merely to a toughness in the texture of the ovary, which interferes

with the free development of the Graafian follicle. It may be due to diseases of the ovary, but he does not make any classification of ovarian dysmenorrhoea *per se*.

In this class of cases he recommends as treatment rest anodynes, galvanism, faradization with secondary current of high tension tonic and antihysterical remedies. Oophorectomy sometimes is beneficial, but in many cases fruitless.

Byford in a note in his textbook, page 254, says: "Ovarian dysmenorrhoea is sometimes described as a distinct variety, but according to our present state of knowledge it cannot be said to deserve recognition separate from the inflammatory or congestive form.

The use of ovarian extract¹ in the treatment of menstrual disorders appears to be very unsatisfactory.

E. E. Montgomery² says that he has never seen the slightest influence from the use of it.

Wilmer Krusen³ used ovarian extract in 5 grain doses daily; no satisfactory or permanent results were obtained in the treatment of dysmenorrhoea, but the drug appeared to modify some of the nervous symptoms which were seen during the artificial menopause. He believes that the use of the extract is based upon a false theory, since the ovary has no internal secretion.

Walter E. Dixon⁴ believes that the ovary is a secreting organ, and claims to have seen beneficial results following the administration of the extract in women upon whom double ovariectomy had been performed.

John St. Taylor⁵ says that in ovarian dysmenorrhoea when the flow is scanty and functional development is delayed Iodide of potassium in increasing doses, Nux Vomica, Quinine and Iron are indicated. Intra uterine faradization is also useful. When the flow is sufficient or profuse, Bromides, Ext. Hydrastis Canadensis Liq.

M X V to XX. Ext. Salic Nig. Liq.

M X V to XX. Tr. Cannab Indica.

M V every hour for seven or eight doses, and hot injections are serviceable.

Mallet⁶ and Shober⁷ found parotid gland extract useful in ovarian neuralgia and dysmenorrhoea. Shober believes it should not be used when gross structural changes are present. The daily dose of the dried extract is

*Read at 53d Annual Meeting, Chicago, May 30, 1903

from 6 to 12 grains. Routh⁷ says ovarian dysmenorrhoea means that the process of ovulation is performed with difficulty and pain. It may precede, accompany or follow the menstrual flow. It takes place during the ripening of the ovum and enlargement of the Graafian follicle, especially when the latter is prevented from rupturing by acute or chronic ovaritis. Brunton⁸ employed black-snake root in the treatment of dysmenorrhoea and ovarian irritation. He employed 30 minim doses of the tincture three times daily, and was able to dissipate the occipital headache and ovarian pains from which the patient suffered. Brunton believes the drug is an anodyne which is valuable as a substitute for the bromides and opiates in dysmenorrhoeal pain.

Munde⁹ explains ovarian dysmenorrhoea thus: the ripening of the Graafian follicle produces more or less intense pain in the respective ovary, and that therefore in peculiarly sensitive females, or with more than one Graafian follicle ripening at one time, this process is attended with decided pain.

Symptoms: 24 to 48 hours before the flow appears sharp darting pains in one or both ovarian regions, generally the left for some reason or another. This pain remains constant or increases until a show of blood takes place, when it is relieved. The pain is not in the median line, but on either side, that is, in the region of the ovaries. In this respect it differs from painful menstruation due to uterine cause.

Treatment: All remedies which are likely to relieve pelvic congestion should be employed, such as hot injections and sitz baths, hot water bags to the part of the abdomen and saline laxatives, mustard plasters to the thighs and calves. Internal medication is of very little avail. In cases where menstruation is not profuse the mother tincture of pulsatilla in 5 drop doses every three hours is very useful.

Cushing and Cumston¹⁰ speak of the dysmenorrhoea from lesions of the ovaries, and give as causes: Delay in the development of the ovaries or an inequality between the evolution of the uterus and the adnexa; all diseases of the ovaries and tubes; other inflammation, be it either recent or old, of the pelvic peritoncum, such as periovaritis or perisal-

ingitis, through the secondary influence that it exercises on these organs; pelvic varicocele, neoplasma and tumefactions in the neighborhood of the uterus—all these causes by the disturbances that they give rise to in regular ovulation either directly or secondarily, produce an exaggeration of the sensitiveness of the ovary or of the uterus, and consequently result in the production of dysmenorrhoea.

Henry D. Fry¹¹ states that in one of his cases he found a prolapsed ovary as the cause of severe dysmenorrhoea, and relief was obtained only after the removal of the organ.

T. J. Beattie¹² states that among the most prominent causes of ovarian dysmenorrhoea is a want of development of the ovaries, inflammation occurring in the tubes, and tubo-ovarian varicocele. Continued ovarian irritations may bring on hysteria, oophoralgia, osphoria-epilepsy, mania, etc. When the disorder is ovarian in character, the pain usually precedes the appearance of menstruation, and in many cases when the flow has lasted for 12 or 24 hours the pain subsides.

T. Gaillard Thomas¹³ in a clinical lecture cites a case. Miss B., single, sick five years, who suffers pain all through menstruation but not before. She is not strong, stomach weak, pallid, breathing rapid, rather anaemic. has constant leucorrhoea and headaches irregularly. Sick for two days only at each period and at these times has to keep in bed and take three hypodermics a day equal to 1 grain of morphia in 24 hours. This is a very simple case of dysmenorrhoea which 25 years ago would have been treated by guaiacum or aloes. At that time all gynaecologists agreed that this form is incurable by any means that were known. Battey operated by excision through the vagina. Tait removed both tubes and ovaries. The usual treatment was country life in summer, galvanism three times a week and hot water injections. Tr. Iodine Co. painted on skin of ovarian region, Canabis Indica and Viburnum Opulus. Combine all these measures and use them together for a year, then operate.

Granville Bantock¹⁴ in discussing a paper on dysmenorrhoea by Skene Keith said he believed there was no such thing as ovarian dysmenorrhoea. It was true that patients often referred much of their pain to the region of

one or both ovaries. But if care were taken to analyze these cases, it would be found that the seat of the trouble was the uterus, the pain being referred to the ovary as in hip joint disease the pain may be referred to the knee.

Heywood Smith¹⁴ thought Dr. Bantock was too sweeping in his statement as to the pathology of dysmenorrhoea, for it seemed to him that ovarian dysmenorrhoea was a well established condition associated especially with eirhotic ovaries.

Hunter Robb states that dysmenorrhoea is a most constant symptom with pathological changes in the fallopian tubes and ovaries. It is relieved by restoring the diseased structures to their normal condition. If produced by slightly adherent tubes and ovaries, benefit is often obtained by Churehill's tincture of iodine applied to the vault of the vagina, or external applications of the same, or of cantharidal collodion to the abdominal wall over the ovarian regions. These methods are, however, temporizing in character. To be absolutely certain that dysmenorrhoea is dependent upon lateral diseases, we must examine these structures under anaesthesia. Marked pathological conditions of the tubes and ovaries generally produce aggravated forms of dysmenorrhoea. The cure is to be found only in the removal of the diseased structures.

Duvelius¹⁶ of Berlin states that ovarian dysmenorrhoea is of very frequent occurrence, and may be due to a true oophoritis or to simple neuralgia of the ovary. He recommends, besides narcotics, ice over the region of the ovaries, or if objected to, hot stupes may be employed. Hip baths, douches, tampons, electricity, and above all gentle massage are also recommended. Cases in which the ovaries are bound down by adhesions are relieved quickly and completely by the latter measure. Ovarian neuralgia at the menstrual period is exceedingly difficult to cure. Even castration often fails to give relief. Pregnancy seems to have a good influence, and it is advisable to favor the marriage of women with this trouble provided it is not associated with hysterical trouble.

Windscheid¹⁷ believes that the elimateric neuroses are essentially hysteric and neuras-

thenic, as shown by the predominance of the various reflexes. The latter may be due to irritation of the nerve ends in the ovary in consequence of atrophy and contraction of the tissues.

Proeida¹⁸ removed the ovaries in a case of membranous dysmenorrhoea. He admits that the disorder may become intractable and suggests their removal when all palliative treatment has failed and existence has become insupportable.

Duvall¹⁹ of Philadelphia says that ovarian dysmenorrhoea is the form most destructive to the general health. The one striking symptom is the nervous, irritable state of the patient. It is associated with headache, much languor and more or less prostration. The local pelvic pains frequently incapacitate her for work and require confinement to bed. He advises against the administration of morphine which gives only temporary relief, exaggerating the subsequent suffering, besides endangering the formation of the morphine habit. He reports three cases of ovarian dysmenorrhoea and mentions three others, all of which he treated with pheno-bromate during three painful menses. In all these cases the relief was remarkable and continued to the end of the period. The only difference in treatment was that the remedy was given in varying doses—grs. Xv to XXv. Duvall strongly recommends this treatment in ovarian dysmenorrhoea.

Whiteloeke²⁰ gives the details of a case in which the chief points of interest are: the complete relief of all symptoms since the removal of both tubes and ovaries; the comparative rarity of recorded cases of intermenstrual pain with such definite periodicity (ten days before in this case); the presence of a fibroid in so young a woman (aged 26) and which showed such rapid shrinkage after oophorectomy; the cystic degeneration of the right ovary coming on so soon after the removal of its fellow; the absolute failure of drugs and cervical dilatation to secure relief; the suspicion that the presence of the fibroid had more to do with the matter than the cystic degeneration of the ovaries; histologically the ovaries showed nothing peculiar.

Dr. Lombe Atthill reported a case of dys-

menorrhoea complicated by the presence of a pedunculated fibroid simulating an ovarian tumor, and in which he removed the ovaries in an unmarried woman aged 30. The results were very satisfactory, and the case was discussed as follows: Dr. Macon did not think that the process of diagnosticating ovarian dysmenorrhoea by the exclusion of uterine trouble should always be followed. Very little was known about dysmenorrhoea, and there were often cases in which the physical examination showed nothing.

Dr. Smyly thought that the pathological condition causing the dysmenorrhoea should always be looked for and treated, just as when treating a cough, the cause and not the symptom should be treated. Nothing was more difficult than to diagnosticate the conditions of the ovary which produce dysmenorrhoea.

Dr. A. Smith believed that an ovary could cause dysmenorrhoea. He had shown one to the academy, which was a good example of a retention cyst. He had removed the ovary and the pain ceased.

Dr. More Madden had frequently seen great dysmenorrhoea caused by very slight abnormal conditions of the ovaries. He thought Atthill's case purely one of ovarian dysmenorrhoea.

Dr. Purefoy thought that ovarian dysmenorrhoea was difficult to treat. In his opinion the pain is not always in exact proportion to the pathological condition of the ovaries. Many have ovaries showing considerable pathological change in cases in which the patient has not complained of much pain.

Gardner²² of Baltimore examined 112 cases of dysmenorrhoea, and called attention to the great percentage of sterility among such cases. Of the 112, 44 or a little less than 40% were sterile. Of those who had been pregnant, 12 or over 10% had never had a child at full term; 15 more, or 13%, had had a miscarriage since the last full term child was born, leaving less than 37% of the total number whose last pregnancy had come to full term. Among the most prominent lesions that interfered with conception was enlarged ovaries in four cases, and prolapsed ovaries in two cases.

Parsons²³ very much doubts the ovarian origin of dysmenorrhoea, to which the formation and growth of an ovarian cyst did not give rise. He states that there is no scientific proof that the ovary *per se* ever causes dysmenorrhoea.

Dr. Stratz²⁴ of Stuttgart, in 1886, called attention to the fact that diseases of the ovaries and of the fallopian tubes might occasion dysmenorrhoea.

Reed in his text book, page 728 says dysmenorrhoea from oophoritis is wholly denied by some who say that the pain is merely referred to the ovary by the sufferer, when in fact it originates elsewhere. Nevertheless there are very competent observers who have blamed certain severe cases of dysmenorrhoea on the ovary by a process of exclusion. Dysmenorrhoea is sometimes found to be associated with large, painful, easily palpated ovaries so irritable that pressure upon them causes pain and nausea.

The study of chronic alcoholism in the female is sometimes confirmatory of the doctrine that inflammation of the ovaries may produce dysmenorrhoea, for dysmenorrhoea is often set up in heavy drinkers as a new symptom about the time the ovaries become large and tender.

The anatomy of the nerve supply of the ovaries has not received the attention it perhaps has deserved. Most textbooks pass over the subject by stating the ovarian plexus passes down with the ovarian vessels to supply the ovary, but do not state definitely how much if any more area is supplied by these fibres.*

It would be interesting to know if more than the ovaries were supplied by these nerve fibres, and if it was found to be true that they did so, the field of usefulness of the operation about to be described would be vastly widened. The operation itself consists of the usual preparations for laparotomy. The uterus is held forward, also the ovary on the side which is being operated. The peritoneum covering the ovarian vessels, viz.: the infundibulo pelvic ligament is slit parallel to the vessels and the areolar tissue

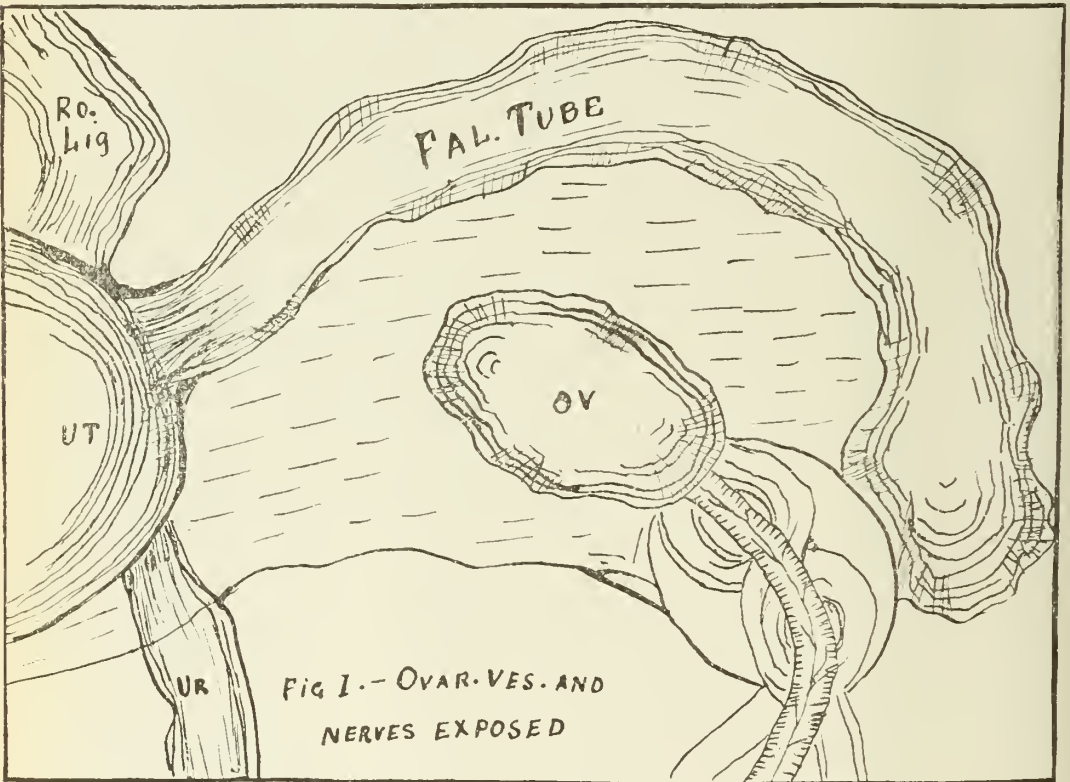
*Since writing this paper the writer has been informed that the ovarian nerve plexus supplies part of the tube, probably the outer half.

stripped from the under surface of the surface of the peritoneum, so as to include if possible any nerve fibres that may be present in this space which is situated between the two layers of the fold of the peritoneum above mentioned.

After this is done a ligature is applied at the brim of the pelvis to the ovarian vessels. It also includes the loose tissues which has been stripped from the extra peritoneal surface of the peritoneum. After ligation is completed at this point, the same process is

It was the writer's privilege to have under more or less constant observation the following case for a period of about six years, during all of which time the patient was practically totally ineapacitated for work.

Miss A., age 33. Menstruated first in the 15th year—some pain with each period until she was 21, when she fell down stairs and injured the lower part of her spine, from which she still has some pain. Between the 21st and 27th year she would be ineapacitated for a day or two at each menstrual



repeated an inch or more further down on the vessel and areolar tissue quite near the outer end of the ovary, after which the part between the ligatures is excised. Fig. 1, 2 and 3.

It is, of course, necessary to repeat the same process on the other side of the pelvis, because in this class of cases the neurotic element is apt to be very pronounced, and the pain is usually referred to both ovarian regions.

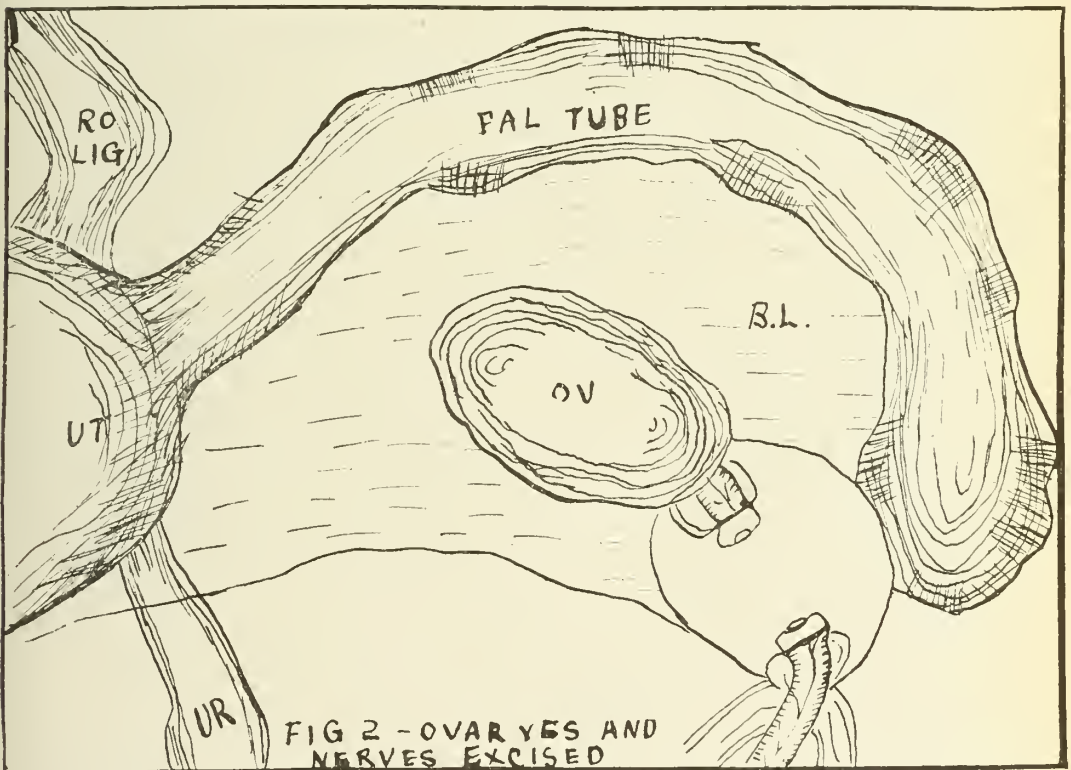
period, her condition gradually growing worse, until in her 27th year she was compelled to give up her occupation as school teacher altogether.

In the summer of 1897 she was eurented. No benefit followed this operation. The next winter she went to Michigan, where she was confined to the house; then in Spring of '98 had local treatments for a couple of months by Dr. Baldwin of Niles. It is claimed that there was a discharge of pus in July and

August, when the discharge ceased. She also suffered from cystitis in July, 1898. In Nov., 1898, she was curetted and operated for rectal polypus and abscess, probably in the ischio-rectal fossa. The sphincter was dilated. After this operation her bowels moved somewhat regularly (previously was obstinately constipated). In Jan., 1899, she was examined under anaesthesia by Dr. A. A. Kerr and myself, and nothing abnormal could be felt. In June, 1900, she was again anaesthetised and examined by Dr. M. L.

ought to be done to relieve her promptly and permanently.

The president of our Society, Dr. M. L. Harris, suggested the performance of the operation which has been described, and this was done June 26, 1902. She menstruated while in the hospital and had no pain, and about four months after the operation she wrote to me saying, "I have not heard from my ovaries since the operation." I have recently seen her and she still has no pain when menstruating, and has a greater flow



Harris and the writer. Dr. Harris was of the opinion that the right ovary was slightly atrophied. In February, 1902, the sphincter was again dilated because of the presence of an anal fissure. During all this time the patient failed to improve to any extent, and as her renal functions had been carefully considered and no insufficiency discovered, and as there was no improvement from the use of Thyroid and ovarian extract and various tonics, it was decided that something

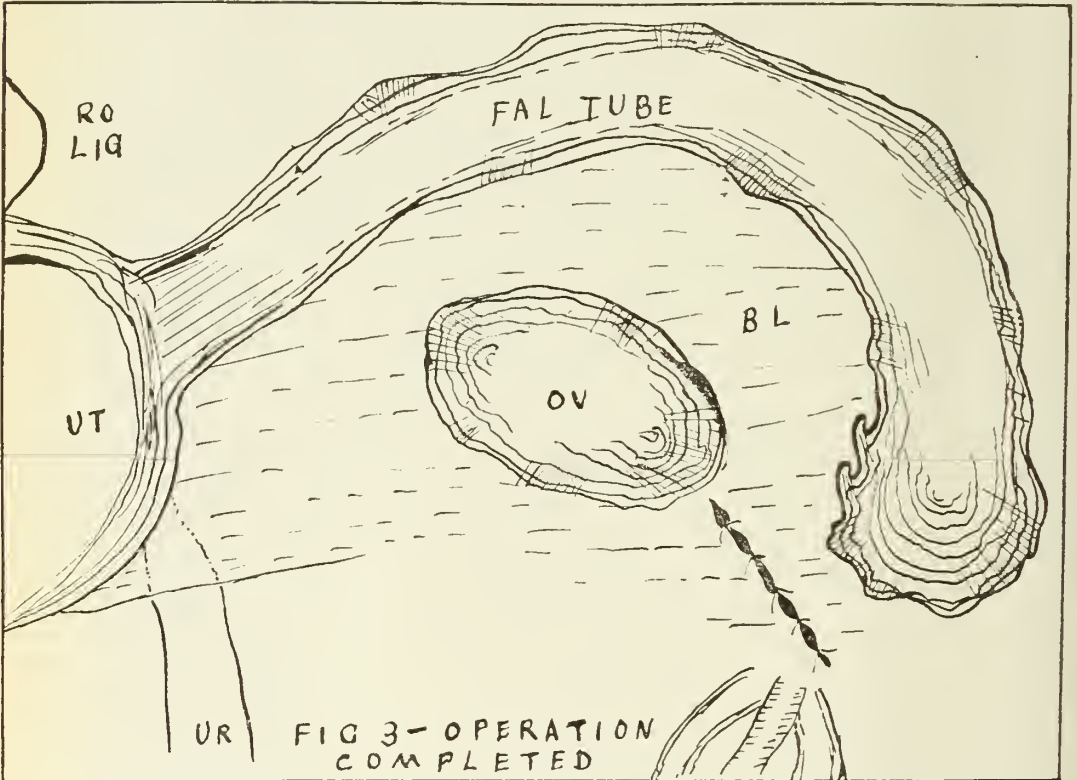
of blood, and her general health is so much improved that she has commenced to work as a stenographer.

The indications for the operation:

Heretofore complete removal of the ovaries has been performed many times for dysmenorrhoea of a severe type, in which there was little or no pathological changes present. The consensus of opinion of those who have had the largest experience is that it is not a justifiable operation, and the writer believes

excision of the nerve supply has a proper field in this class of cases and in those cases of pain, the result of ovaritis, periovaritis, tubo-ovarian varicocele, in fact almost any condition accompanied by pain in the region of the ovaries possibly in conjunction with other operative procedures. The writer has performed this operation in a case of retro-versiouteri and one case of old standing salpingitis with complete relief of pain in the pelvis, but he refrains from expressing an opinion in these cases, because the same

2. International Medical Magazine, Nov., 1900.
3. American Gynaecological and Obstetrical Journal, March, 1900.
4. Practitioner, May, 1901.
5. International Medical Annual, 1889, page 235.
6. Deutsche Med. Zeitung, No. 82, 1899.
7. London Clinical Journal, July 5, 1890.
8. Practitioner, April, 1892.
9. Medical Brief, 1896, Vol. 24, page 673.
10. Twentieth Century Practice of Medicine, Vol. XII, page 582.
11. American Gyn. and Obstetrical Journal, Dec., 1901.
12. Kansas City Medical Record, 1893, Vol. 10, page 400.



amount of relief might have resulted if the patients had had merely the usual operative procedures carried out, as was done in these two cases.

In closing the writer again wishes to express his gratitude to Dr. M. L. Harris for the suggestion of the operation, which as far as I can learn, was original, and to Dr. J. B. Mahony for the drawings with which he has kindly furnished me.

References.

1. The Lancet, Oct. 5, 1901.
13. Medical Gazette, New York, 1883, Vol. 10, page 184.
14. London Lancet, 1898, Vol. 1, page 1690.
15. Hare's System of Practical Therapeutics, 1892, Vol. 3, p. 794.
16. La Semaine Medicale, Oct., 1895.
17. Deutsche Praxis, No. 7, 1899.
18. La Gynecologie, April 15, 1897.
19. Medical Review of Reviews, 1900, Vol. 5, page 882.
20. British Medical Journal, Oct. 11, 1902.
21. Transactions of the Royal Academy of Medicine, Ireland, 1895. Vol. 13, page 599.
22. British Medical Journal, Oct. 24, 1897.
23. Zeitschrift f. Geburts u Gyn. 1886, Vol. 12.

DISLOCATION OF THE METACARPO-PHALANGEAL JOINT: IRREDUCIBLE UNDER ANESTHESIA. OPERATION.*

BY HOMER M. THOMAS, A. M., M. D., CHICAGO.

The relative frequency of joint dislocations may be summarized from the records of the St. Thomas Hospital, London, England. Of 812 dislocations of all joints, 86 or 10.59% were of the fingers. These were localized as follows:

Metacarpo phalangeal	14
First inter phalangeal.....	20
Second phalangeal	17
Joint unstated	35

The most frequent or common type is the dorsal. The palmar dislocation is of rare occurrence. Dislocation of the index finger at the metacarpo phalangeal joint, laterally has been observed. With the more frequent publication of these conditions, this dislocation is probably not so rare as formerly supposed. Anatomically, we are confronted with the nature of the ligament forming the Anterior segment of the joint Capsule. This consists of a fibrocartilaginous plate loosely attached to the proximal bone, but firmly blended with the base of the distal one. Doubtless the purpose of this is to prevent dislocation. At the same time, however, in the event of dislocation, it interferes with its reduction. The cartilaginous plate is apt to be actually drawn over the head of the proximal bone; interposing itself between the displaced bones—the dorsal segment of the capsule offering little obstacle to displacement. These statistical and anatomical observations are presented as preliminary to a description of a case of dislocation of the metacarpo-phalangeal joint of the left index finger. The patient, Miss Z, aged 20, 5 feet 10 inches in height, weight 143 pounds, was employed in one of our large mercantile establishments as a clerk. While standing upon a stool four feet in length, and reaching forward to arrange some decorations, she lost her balance and fell upon an inlaid cement floor. Unable to grasp anything to prevent

her falling, she swung her left hand backwards, the fingers of which were in a state of extension, and fell, with much force. The only point of contact, from which injury resulted, was the index finger of the left hand. Seeing her shortly after the accident, there was noted a palmar dislocation, upward, inward and backwards of the head of the bone at the metacarpo-phalangeal joint. Immediate efforts at reduction, without anaesthesia, were made. These all failed, the head of the bone remaining unmovable. Profound chloroform narcosis was then produced. Active efforts at reduction were then instituted. These consisted of forcible extension, rotation and flexion with manual pressure upon the head of the bone. These all signally failed. Fearing the failure to effect the reduction might be due to a lack of skill on my part, Prof. John E. Owens, my old professor in joint surgery was summoned. After repeated and vigorous efforts by Prof. Owens, as well as myself the dislocation still remained. The patient was now allowed to come out from under the chloroform. When sufficiently conscious, she was taken to a near by "X" ray laboratory, and the hand exposed. I herewith present for your inspection the original "X" ray plate: also the finished photograph. By comparison with the uninjured metacarpo-phalangeal joint articulations, the extent of the dislocation is readily appreciated. These findings at once demonstrated the futility of further manual efforts at reduction. An operation was decided upon as the only means of securing normal approximation of the joint surfaces. The anesthetic used was chloroform, which Prof. Owens kindly administered. After the hand and forearm had been surgically prepared, an Esmarch bandage was applied at the elbow joints. I then operated in the following manner. An incision was made through the integuments and muscular fibres down to the head of the bone. The transverse anterior and lateral ligaments were exposed. Efforts at reduction were made, but accomplished nothing. A deeper dissection through the transverse and anterior ligaments revealed the difficulty. The lateral ligament was found twisted over and around the head

*Read at 53d Annual Meeting, Chicago, May 30, 1903

of the bone, binding it down and effectually holding it in the abnormal position described. An incision through the fibres of the lateral ligament, where it twisted over the head of the bone, at once allowed easy reduction of the dislocation. The wound was closed by the introduction of one deep cat gut suture through the muscular and aponeurotic fibres, of the line of incision; and also five cat gut superficial integument stitches. The palmar surface of the hand was antiseptically dressed with the fingers in a semi-flexed position. Aside from considerable nervous phenomena which persisted several days succeeding the operation, the patient made an uneventful recovery. She has very kindly come to this session, and those wishing can inspect the hand. The result is an excellent one. The movements of extension are normal. The finger flexion at the metacarpophalangeal joint is partially interfered with from an inflammatory ankylosis. This accident occurred October 15, 1902, only some six months ago. Judging from the continued improvement in motion at the joint, I apprehend all evidences of the injury will practically disappear in a comparatively short time.

CASES SIMULATING APPENDICITIS.*

BY H. A. BRENNECKE, M. D., AURORA.

In looking over some of the literature on appendicitis I find that many errors in its diagnosis and particularly the acute form are recorded. I wish to add a few that have come under my observation. Before speaking of these, however, I will briefly review some of those recorded by others:

Janeway (1) speaks of the following pathologic conditions simulating appendicitis:

1. Neuralgia of the lower abdominal nerves of the right side.
2. Renal colic.
3. Intermittent hydronephrosis.
4. Movable kidney.
5. Cholecystitis.
6. Ulceration or narrowing in the hepatic flexure of the colon.

7. Abscess of ovary.
8. Retained menstrual flow.
9. Retroperitoneal abscess.
10. Hypochondria.

J. F. Baldwin (2) records a case of Hydrosalpinx with twisted pedicle simulating appendicitis.

A. V. Wendel (3) reports a rupture of parturient womb which resembled appendicitis.

M. H. Richardson (4) speaks of a typical case of typhoid fever to be differentiated from appendicitis.

F. H. Russell (5) reports a case of fatal vaccination infection which resembled appendicitis. This was a patient brought to the Presbyterian Hospital in a semicomatose condition, the abdomen tympanic and tender, the right leg drawn up. The case was seen by one of our most eminent surgeons, the late Christian Fenger, who advised operation. On opening the abdomen the appendix was found normal but the peritoneum inflamed. A post-mortem examination made the following day showed that the infection had originated from a vaccination on the right leg and had traveled up to the inguinal glands, from thence to the iliac gland and peritoneum. Bacteriologic examination determined the infection to be due to the staphylococcus pyogenes albus.

A. Pinard (6) records a case in which a non-inflamed appendix acted as a band constricting the bowels. The case was complicated with pregnancy. He also speaks of differentiating appendicitis from threatened abortion, spontaneous rupture of uterus and hyperemesis.

Hern Muhsain (7) reported to the Berliner Surgical Society a case of typhoid fever which had a chill, local tenderness and induration. He operated and found an ulcer in the caecum which had ulcerated to the serous surface.

C. Thienhaus (8) reports a case of incarcerated scrotal hernia in which he found on operating an appendicitis with abscess.

Schultz (9) reports a similar case to the Hamburg Surgical Society which resembled

*Read at 53d Annual Meeting, Chicago, May 30, 1903

strangulated hernia in which he found an inflamed appendix.

E. Metschnikoff (10) reports cases diagnosed as appendicitis with recurrences which after being relieved of the *Ascaris*, had no further symptoms.

George Emerson Brewer (11) reports eleven cases in which he with others made a diagnosis of appendicitis and found the following conditions—two were cases of renal calculus; one, sarcoma ilium; one cholecystitis; one acute suppurative pancreatitis; four were diseases of uterine appendages and two were general sepsis.

M. J. Rostowzew (12) reports a case of hemorrhage from a mesenteric gland in typhoid fever which simulated appendicitis. Operation was done, patient died on second day and a post-mortem examination made with the above findings.

A. Rebutius (13). In this case the conditions were reversed. He reports a case which was diagnosed peritoneal tuberculosis. There was fluid in the abdomen which seemed to shift position with a change of position of the patient. He tapped with a trocar and found a greenish turbid fluid. General peritonitis followed. A post-mortem examination showed no tuberculosis but an ulcerative appendicitis with abscess.

The following cases have come under my observation:

Case 1. This is one which some of you may have had. A German, age about twenty-eight, admitted to the Augustana Hospital during my service there as interne. The patient walked in and volunteered the information that he had appendicitis, also that he had been previously operated for the same trouble by Dr. Senn. On examination we found the heart and lungs negative, no temperature, pulse 80 to 90, abdomen flat, shows a scar about 10 c. m. long over the appendiceal region, quite tender over McBurney's point. Hot packs were ordered. Later in the day he complained of intense pain and on examination we found the abdomen extremely tympanic. The staff surgeon was telephoned for. He, after making an examination, advised operation at once. The patient, however, stated that he had telegraphed

his brother who was said to be a doctor in Cleveland, Ohio, and begged to wait until morning when he would be here. His brother, not having arrived by morning, he was again urged to allow operation but he asked to wait another day. He was given morphine hypodermically which did not seem to relieve the pain even in half grain doses. He refused to take castor oil and it was therefore given by stomach tube. This reduced the tympany but in the course of three or four hours he was distended as badly as before. At the end of a week his brother had not arrived, and as the patient refused operation, he was dismissed from the hospital. About a year later while in my junior surgical and again during my senior surgical services in the Cook County Hospital I had the same patient, but as he refused operation, we gave him neither board nor morphine. I have since learned that he has also been in the West Side Hospital and the hospital at LaSalle, Ill. The reason for urging operation was the possibility of constricting bands.

Case 2. Was a gangrenous pancreatitis which has already been reported with another which I had shortly after (14). I will therefore give only a brief outline. Male, age forty-three, heavy user of whiskey, was taken with intense abdominal pain while in a saloon drinking cold beer. When he was examined at the hospital he had diffuse pain and tenderness over the entire abdomen with obstinate constipation. There was an area of dullness which extended from the region of the appendix toward that of the gall bladder. Several of the attending staff examined him and the diagnosis lay between appendicitis and gall bladder disease. A post-mortem examination showed gangrenous pancreatitis.

In connection with this case I wish to mention one which I was called to see in consultation with Dr. Lord of Plano and which with his kind consent I will report. Mrs. T., age forty-five, weight about 200, had a chill, severe pain in the abdomen with symptoms of collapse, temperature 103, pulse 140 to 150, very weak and thready. A consultation of the local physicians was held and a diagnosis of perforated appendix was made. When I saw her a day or two later she com-

plained of considerable abdominal pain chiefly in the right iliac region and a dry irritating cough. The expression was pinched, pulse 120 to 130 and very weak, respirations rapid and shallow 40 to 50, sclerae clear, tongue dry and coated, lungs and heart negative, abdomen tympanic and tender, most of the tenderness being over the right side. A diagnosis of a peritonitis resulting from a ruptured appendix or gall stone colic with rupture was made. As there were evidences of a general peritonitis, I advised rectal feeding with hot fomentations. In the course of a week the patient's pulse and temperature had much improved, pulse 80 to 90, temperature normal but was at times delirious. Complained of much pain always in the right side and of feeling exhausted. I was again called and on examination found the sclerae icteric, tongue dry, abdomen still tympanic, most of the tenderness in right iliac region though also very tender in the epigastrium. The urine showed no sugar or albumen. On questioning the nurse in regard to the appearance of the bowel movements she stated that there were about one to two tablespoonfuls of a whitish substance floating on same which left the vessel greasy. She said she had never seen a bowel movement just like it. There was no bowel movement at hand which I could examine, but it was later examined more carefully and found to be fat. At this time I made a diagnosis of pancreatitis with general peritonitis, basing my diagnosis on the sudden onset, intense abdominal pain, collapse symptoms, fatty stools, tenderness over epigastrium and icterus; the last named symptom corresponding well with the present theory in regard to the etiology of pancreatitis, i. e., that it is caused by gall stone obstruction with resulting flow of bile into the pancreas, as shown in Opie's experiments on dogs. The patient's delirium gradually grew worse, the pulse more rapid and fever again developed. Death resulting about two weeks after the beginning of the sickness. Unfortunately a post-mortem examination was not allowed.

Case 3. Mr. R., age twenty-four, stenographer. The patient had been under my care at times for a minor skin trouble; father

died from cerebral hemorrhage; mother living, very anaemic and often complained of her stomach. Her stomach condition had been diagnosed as carcinoma by eminent surgeons some fifteen years previous; one sister living, strong and well. The patient was likewise very anaemic but seldom complained of anything except his skin trouble and slight dyspeptic symptoms; no cough and no abdominal pains. On a Sunday morning he was taken with severe abdominal pains, chill and vomiting. I saw the patient some hours later and found him complaining of considerable pain in the right side of the abdomen. Sclerae were pale bluish white, tongue coated, pulse 118, temperature 102.4, lungs negative, heart enlarged one finger's breadth to the left, the enlargement probably due to excessive bicycle riding, liver dullness to the costal arch, spleen not palpable, abdomen tender with point of greatest tenderness over McBurney's point. Hot packs and liquid diet were ordered. The pain subsided, the temperature ranged for a number of days from 99 to 100, pulse 90 to 100. A little to the left of McBurney's point we could outline a distinct mass about the size of a walnut. We now decided to operate and took him to the hospital. When I saw him the following morning he said he had taken a cold in the ambulance. He coughed and complained of pain in the right chest on respiration. On examination found a pleurisy. The operation was in consequence postponed for a week. Soon after the beginning of the anaesthetic he became cold and clammy and remained so throughout the operation. On opening the abdomen the appendix was found normal but immediately to the right of it was a mass. To the left of it we found a number of enlarged glands. On the bowel itself were found small subercles. The mass to the right of the appendix was walled off with gauze, the adhesions broken and we found about two teaspoonfuls of a cheesy pus. The pocket was sponged and a small drain inserted. There was also a small amount of clear yellow fluid in the peritoneal cavity. The patient's condition gradually grew worse until he died. We were permitted to only enlarge the incision sufficiently to allow a good inspection of

that part of the abdominal cavity. The bowel surrounding the field of operation was normal in color and shiny. A small amount of clear fluid was found in the abdominal cavity. A number of macroscopic tubercles were seen on the peritoneal surface of the bowel. On separating the adhesions running to the pocket which we drained, we found the pus had come from a caseating mesenteric gland. In other parts of the abdomen more glands were found which on section showed caseous areas. On opening the bowel a number of ulcers were disclosed on the mucous membrane. As a more complete examination was not allowed we could not determine the condition of the other organs. The cause of death was probably a generalized miliary tuberculosis.

In looking over the literature of this subject I find the majority of cases reported to be anomalous typhoid and pancreatitis. To distinguish typhoid fever from appendicitis we now have the agglutination reaction which is positive in ninety-five per cent of the cases or since the work of Schottmuller, and of Ruediger in this city cultures can be made from the blood and found before the agglutination reaction can be obtained in a considerable percentage of cases. These methods of differentiating typhoid fever and appendicitis are, however, of little avail when during the course of typhoid fever, conditions arise which produce symptoms simulating appendicitis such as illustrated by cases 4, 7, and 12. As before stated, a considerable number of acute pancreatitis have been mistaken for fulminating appendicitis. The diagnosis of acute pancreatitis in itself offers great difficulties. In the three cases which it has been my good fortune to see, the most prominent symptoms have been sudden intense pain; in two of the cases the pain being sufficient to cause the patient to sink to the ground, tenderness over the entire abdomen, obstinate constipation, excessive tenderness over the epigastrium, later icterus and fatty stools.

References.

1. Journal American Medical Association, June, 1900.
2. Tex. Clinic, April, 1900.
3. Medical Record, May 26, 1900.
4. Boston Medical and Surgical Journal, January, 1902.
5. Journal American Medical Association, January, 1902.

6. Bull. de l' acad. de Med de Paris, 1900, No. 9.
7. Berlin Surgical Society.
8. New York Medical Journal, June, 1901.
9. Surgical Society of Hamburg.
10. Bull. de l' acad. de Med de Paris, T. LXV.
11. Annals of Surgery, May, 1901.
12. Boln, Gazeta Botkina, April, 1902.
13. Mittheilungen aus den Grenzgebieten d. und Chirurgie Bd. X. Hft. 1 und 2.
14. Journal American Medical Association, June, 1898.

PULMONARY TUBERCULOSIS AND AND ITS HOME TREATMENT.*

BY JAMES L. LOWRIE, M. D., LINCOLN.

Tuberculosis is an infectious disease, communicable in character, caused by bacillus tuberculosis, the lesions of which are characterized by nodular bodies called tubercles or diffuse infiltrations of tuberculous tissue, which undergo caseation or sclerosis, and may ultimately ulcerate, or in other situations calcify.

This disease attracted the attention of close observers as long ago as the fifth century before the Christian era. Hippocrates in his writings refers to the salient points of the disease, but the description of pulmonary tuberculosis by Arctaeus remains a classic. To pathological anatomy and the studies of the post-mortem table are we largely indebted for the discovery of the true nature of this dread disease.

However it was left to the nineteenth century to give us a true conception of tuberculosis by demonstrating the tubercle to be the true lesion. Primarily presenting the appearance of a grayish semi-transparent substance, later becoming yellowish and dense, then breaking down into a pus like substance.

The microscope in the hands of careful investigators of various nationalities, the German predominating, has during the past fifty years demonstrated and established the fact that tuberculosis is a specific virus, inoculable and contagious in its nature. Bacteriological examination, the details of which I will not weary you with, is a factor, the importance of which we can not ignore in our efforts to correctly diagnose tuberculosis, realizing as

*Read at 53d Annual Meeting, Chicago, May 30, 1903

we now do that it is a preventable disease, in fact no communicable disease is more easily prevented.

The knowledge that one seventh of all deaths is directly due to tuberculosis in some form or other is appalling. In Illinois there are more than 8,500 deaths from consumption each year, a greater number than from all other communicable diseases combined. Yet is 80% of this number curable if the disease is recognized in its incipency and properly treated. There has been a marked decrease in the mortality from tuberculosis during recent years among all intelligent nations, as is satisfactorily proven by statistics, due to our fuller knowledge of its character, and greater ability to combat successfully its inroads.

Sunlight being now recognized as the most potent natural agent for destroying the bacillus—a fact to be given due weight when we consider its successful treatment.

The prevalence of tuberculosis in a general way is indicative of the density of the population in the various parts of the world. Altitude having less influence upon the death rate than the sparseness of the population, in elevated regions heretofore claiming immunity. Social and economic life are factors more potent than either climate or altitude in the prevalence of this disease. The aggregation of human beings, indoor life, malnutrition and unhygienic surroundings contribute to the element of infection.

Galen recognized the contagiousness of phthisis, and at Naples a royal edict of September 20, 1782, prescribed the sequestration of consumptives, and the disinfection of his locality, effects, etc., under penalty of imprisonment and fine. The physician who failed to report a case of phthisis was subject to a heavy fine, and for the second offense banishment for a term of years. Hence we see the proposed enactment recently of controlling laws by certain states is not without precedent.

Heredity plays an important role in the development of tuberculosis, not as was formerly thought in the direct transmission of the disease from parent to child, but a tendency or predisposition, rendering the sub-

ject less able to resist the infective process, this tendency is more largely inherited from the female than the male members of the family. Admitting the truth of this statement yet is the infectious nature of pulmonary tuberculosis by its transmission from husband to wife, and vice-versa, demonstrated.

The high mortality among religious orders, in prisons, and among nurses, is more than suggestive of the transmissibility of the disease. Some infectious diseases such as influenza, measles, etc., are followed by pulmonary tuberculosis. Whether this is due to a recent infection, or to a latent tuberculosis as demonstrated by post-mortem investigations is yet an open question.

Among the most marked predisposing conditions contributing to this disease, are lowered vitality from any cause, extreme impurity of the air, absence of sunlight, etc. The extent of the tuberculous process depending upon several factors, such as the number and strength of the bacilli, the susceptibility of the individual and nature of the involved tissue. One of the most striking features of tuberculous inflammation is the appearance of an opaque material, of yellowish color, cheesy in character, hence the term caseous or cheesy degeneration or necrosis. Disintegration results in the formation of cavities filled with pus, and possibly granulation tissue containing tubercles.

Pathologically considered, tuberculosis of the lungs usually begins as a local disease; again it may be only a part of a general process involving other organs of the body. Infection of the lungs most frequently takes place through the respiratory tract, the bacillus being arrested in the terminal bronchioles, since these parts are lacking in ciliated epithelium. The right apex being the most frequent seat of tuberculosis in the adult. Miliary tuberculosis is an eruption of tubercles in one or both lungs, and may at same time involve the kidneys, spleen, liver, bowels, etc.

The general term tuberculous pneumonia or phthisis, includes all forms of pneumato-genus tuberculosis, any form of which may assume an acute or chronic type. For example: Acute pneumonic tuberculosis,

designated by the laity "Galloping Consumption" affects both adults and children, although the latter are particularly susceptible.

Lobar pneumonic tuberculosis—as the name would indicate—always involves considerable portions of the lung structures. Broncho pneumonic tuberculosis—is a form of the disease to which children are particularly subject, and is very rapid in its fatal course. Chronic tuberculous pneumonia—this class comprises by far the largest number of cases affected by tuberculosis, the changes in the lung structures being largely modified by the chronicity of the disease. One of the most marked features of which is cavity formation, as the result of degenerative and necrotic process.

The distribution of the tubercle bacillus is almost wholly due to the indifference and criminal ignorance of sufferers from phthisis in the disposition of their sputum on floors of public and private buildings, cars, carriages, etc. The dust engendered becomes virulent and the poison is sown broadcast among the people. Some other sources of infection are meat, milk, the hands of consumptive patients, drinking cups, cigars, cigarettes, etc. Accidental inoculation, and as the result of religious rites are recognized as unquestioned avenues for the spread of the great white plague.

While pulmonary tuberculosis is recognized as an infectious disease, constitutional in its nature, its origin is a local infection, extending until it involves other organs and tissues of the body. The tubercle in its development being very much alike, the symptoms will vary with the nature and function of the involved organ or organs.

Thus pulmonary tuberculosis is revealed by the characteristic cough, sputum, hemorrhage, etc., these organs being affected with greater relative frequency than all others. Anaemia being one of the earliest constitutional symptoms of phthisis accompanied by loss of appetite and flesh. Fever is one of the most important symptoms in tuberculosis, owing to the ravages which it causes in strength and vitality. The more acute the attack of phthisis the higher the tempera-

ture curve, and the earlier its manifestation, while chronic cases may run their whole course with but slight febrile manifestations.

Pulmonary phthisis presents no characteristic temperature curve at any stage of its progress, and fever in some cases may be entirely absent, even when large cavities have been formed.

Neither must we ignore the fact that malaria may have its influence on the febrile manifestations in these subjects and increase the periodical rise of temperature.

Fever likewise has a great influence upon the amount of perspiration, a symptom so greatly dreaded by sufferers from pulmonary tuberculosis, owing to its devitalizing effect upon the system.

The early morning hours, or from one to four o'clock seems to be the time* for the manifestation of this symptom in its most aggravated form. A rapid but usually regular pulse lacking in volume, and sometimes associated with more or less palpitation of the heart is a symptom of considerable importance, this condition is aggravated by emaciation affecting all structures of the body.

Cough being a manifestation of some respiratory irritation, as a logical sequence sputum or some irritating substance gives rise thereto. Eliminating other sources of irritation even if careful physical examination fails to demonstrate organic change in the lungs, and broken down tubercle and lung tissue appear in the sputum, a microscopic examination demonstrating the existence of tubercle bacilli in greater or less numbers then is the nature of the disease well established at an early stage.

The amount and character of the sputum largely determine the character of the cough, which is usually for obvious reasons, most severe in the morning following a few hours rest. The sputum in the early stages presents the appearance of a glairy mucus, later becoming more opaque and yellowish in color and may be streaked with blood, and if cavities exist intermingled with pus.

Hemorrhage in pulmonary tuberculosis is considered a symptom of gravest import by the laity, while the physician realizes that

many times the effect is of marked benefit to the sufferer.

Altitude and the humidity of the atmosphere are contributing causes, exciting this complication. In fact the existence of the disease may be first discovered by an attack of hemoptysis, although most likely to occur in a severe type following the formation of cavities. The pulmonary character of the hemorrhage is determined by the bronchial rales and the color of the blood. Pain and dyspnoea are prominent symptoms although not always present in tuberculosis of the lungs. The degree and the character of the pain varies greatly from sharp and lancinating to dull and heavy, and is due to a pleuritis in the region of the tubercular affection.

Dyspnoea is an interesting symptom, as much from its absence in a great number of severe cases, as from its usual origin, rapid action of the heart. It many times assumes an asthmatic form, and in fact a differential diagnosis is often almost an impossibility.

During the progress of tuberculosis the stomach may become so disorganized as to function as to interfere with, or prevent the proper nourishment of the patient, producing that peculiar form of emaciation with which we as physicians are so familiar in phthisical subjects.

The skin presents a peculiar grayish tint, the veins show through, and can be easily traced in all their ramifications, the fingers become thickened or clubbed in their distal phalanges, the hair becomes crisp and scant, and in the last stages we are apt to have oedema of the feet and legs.

Pulmonary tuberculosis frequently complicates diabetes-mellitus, hence every case of phthisis should frequently have his or her urine examined for sugar.

The mental condition of tuberculous patients is striking, owing to their hopeful disposition and tendency to speak lightly of their ailment, as well as of their assured speedy recovery. Although this is the rule we must not ignore the fact that patients occasionally become melancholy, and may even develop acute mania, with its attendant evil tendencies and involved responsibilities.

The sexual appetite and function varies greatly in phthisis, often fortunately being entirely absent. A more pitiable sight than a tubercular woman in the throes of labor can not well be imagined, yet have many of us here today been called to render aid in this the most trying hour of a woman's life, with phthisis superimposed.

In diagnosing pulmonary tuberculosis certain physical signs are of importance as aids. For example: Inspection and percussion of the chest wall. Auscultation and palpation giving us a fair idea of the physical condition of the lung structures. Yet the only positive indication of the disease is finding the tubercle bacillus in the sputum.

Of all available methods of investigation in pulmonary tuberculosis, excepting only the microscope, auscultation is the most exact and positive as to the extent of involvement of lung structures, and the early date thereof, due to the changes in the normal respiratory murmur heard in the apex of either lung, the expiratory murmur being prolonged, louder and rougher, in marked contrast with the inspiratory murmur, their relations in disease being reversed as to time and pitch, due to the obstacles presented by the tuberculous deposit in the alveoli and finer bronchi to the exit of the air.

Rales with their variations as to character and pitch are valuable symptoms. Mensuration and the general appearance of the patient have an important bearing in arriving at a correct diagnosis in pulmonary tuberculosis.

The Roentgen or "X" ray has not thus far proven of material diagnostic value although much labor and time has been devoted to this subject by experts and original investigators. What the future may develop along these lines is problematical.

Tuberculin, while of admitted value as a means of discovering the presence of the tubercle bacillus in suspected cases in the animal kingdom, has naturally been held in popular dread as a means of diagnosis in the human family, fearing possible evil results from so potent an agent.

There is still an important factor, the value of which we must not ignore, that is

the type assumed by the disease. Whether acute or chronic, or whether the pathological changes are rapidly progressive, or slow in character, sometimes lasting many years, maybe ultimately resulting in apparent recovery, or we may have an intermingling of these types.

The pathological unity of all tuberculous diseases was demonstrated by Laennec about the beginning of the nineteenth century. The inoculability and virulence of the disease was demonstrated by Villemin in 1865. Koch by his great discovery in 1882 demonstrated the presence of a distinct micro-organism and the specific nature of tuberculosis, therefore no matter how varied its form or the structures attacked, its specific factor is always the bacillus tuberculosis.

The patient confined to his bed by pulmonary tuberculosis is obviously a much less source of danger to his fellows, than the one able to be around and taking no precautions for the destruction of the bacillus, but expectorating everywhere. The sputum drying is inhaled through the nasal passages, and if a catarrhal condition exist tuberculosis is apt to follow, in fact the great majority of cases arise in this way, since in health the mucus secretion of the nasal passages possess bactericidal properties rendering the subject immune.

A proper education of the ignorant tuberculous subject as to his responsibility, and impressing upon his mind a proper sense of his duty to those by whom he is surrounded, by kindly means if possible, only resorting to harsh methods if necessary to enforce proper precautions and care in disposing of the sputum, is one of our most effective preventative measures, since we must all realize that the wishes and caprice of the individual are not for one moment to be weighed in the balance as against the welfare and health of the many. Properly constructed cuspidors, or a pocket flask faithfully used by the sufferer will prove important and essential factors in the prevention of tuberculosis. The accumulated sputum pregnant with the bacillus in almost inconceivable numbers being destroyed either by boiling in water, the

use of germicidal disinfectants or better still by burning.

Nurses and servants having care of rooms occupied by consumptives should always protect themselves from possible infection from inhalation of dust by wearing a face mask.

Experience and close observation has demonstrated to the entire satisfaction of scientists and sociologists that alcoholism is one of the most potent contributing causes of pulmonary tuberculosis, by preparing through its devitalizing influence the system for infection, at the same time it has been demonstrated with equal certainty that phthisis is one of the most curable, as well as most frequently cured disease.

Lastly all bodies of individuals dying of pulmonary tuberculosis or tuberculosis affecting any organ of the body should, for the sake of the living and as a sanitary measure pure and simple, be cremated.

Tuberculosis among cattle owing to the almost universal use of milk is now recognized as a source of danger to man, which danger is now being reduced to the minimum by the enforcement of proper precautions among dairy herds.

A predisposition to pulmonary tuberculosis is undoubtedly inherited. Yet such individual need not despair, since a regular and hygienic life, from the cradle to the grave I might say, offers an almost certain means of escaping this dread disease, presupposing the parents of such child or children to have been properly instructed as to their duty and obligation, and in case of tubercular parentage, one or both being affected, this obligation begins with the foetus in utero.

There are about forty cases on record of direct bacillary transmission of tuberculosis to the child in utero, although the great majority of cases of infantile tuberculosis are due to post nasal infection, owing to the close relationship of mother and child, and the almost criminal ignorance that permits ordinary precautions to be ignored and neglected.

After birth the child inheriting this predisposition should have pure fresh air, sunlight, bathing and either a healthy wet nurse

or artificial feeding as his circumstances will permit, and when old enough to be instructed as to proper and deep breathing, with the removal of adenoids, or any other diseased condition impairing the freedom of the nasal passages, these are among the most certain preventative measures at our disposal.

Again it can not be impressed upon the minds of consumptives, and those predisposed to the disease too forcibly, that the atmosphere in which they live has more influence over their health and happiness than all other accidents of fortune by which they may be surrounded.

Nearly all eruptive diseases of childhood and adult life including LaGrippe frequently exercise a predisposing influence toward pulmonary tuberculosis.

This disease manifests itself most frequently in subjects between the ages of 17 and 35 years, and one of its surest and earliest signs is the low inspiratory murmur with roughness, when constant and located in one of the apices.

A cheerful disposition, a strong will and a good stomach, with a full understanding that the chances of his recovery depends almost wholly upon his obedience in carrying out the line of treatment prescribed for him in its minutest detail, is obligatory. Yet the true solution of the problem of tuberculosis lies in the proper education of the masses, so that they will fully comprehend the importance of preventative rather curative measures. In which destruction of sputum, good food, out-door life, proper ventilation of both living and sleeping rooms, avoidance of alcohol in any form, with good hygienic surroundings are of supreme importance. Hygienic treatment has thus far yielded the best results in pulmonary tuberculosis, since it can be carried out in all climates, hence is the most important factor in the home treatment of phthisis.

Purity of atmosphere lacking in extremes of temperature, with a dry and porous soil, free from miasmatic influence in connection with the greatest number of sunshiny days, are when attainable very desirable features, adding both to the comfort, welfare and pleasures of the sufferer, yet experience has

demonstrated the fact that beyond dispute that they are not absolutely essential to recovery, as has been proven by the results of treatment in Scotland and certain portions of this country. In making this statement I refer more particularly to the location of hospitals especially devoted to the care of tuberculous patients.

Neither does this experience militate against the importance of and benefit derived by tuberculous patients from sunshine and sun baths. The largest, sunniest and brightest room in the house should be given the sufferer, divesting it of all carpets, heavy curtains and upholstered furniture, retaining such articles of a light, serviceable and attractive appearance as can be readily cleaned and kept free from dust, yet enhance the attractiveness of his surroundings, since the mental condition of the patient is a factor many times but imperfectly considered in our efforts to cure pulmonary tuberculosis.

Ventilation day and night, avoiding a draught always, spending the day in an easy reclining chair, protecting the patient from winds and his head from the direct rays of the sun by some simple and portable device, while his body is constantly bathed in sunshine. In fact resorting to every means available by which every hour possible may be spent in the open air, not ignoring the fact that the treatment must be individual, and adapted to the patient, not the patient to the treatment.

It is surprising how readily phthisical subjects adapt themselves to this mode of life, and how soon heat, cold and atmosphere changes are borne by them with an impunity that to the inexperienced almost savors of recklessness.

Rest in the open air properly protected by wraps and furs in cold weather, combined with respiratory exercises suitable to the strength of the sufferer to prevent hypostatic congestion yields wonderful results. Loose and suitable clothing must be worn that there may be no hinderance to full and free thoracic and abdominal respiration, corsets, stiff shirts and high collars must be abandoned at once.

The amount of physical exercise allowed should be governed absolutely by the ther-

monometer, the slightest degree of exhaustion being positively forbidden, a lasting temperature of 100 Fahrenheit absolutely forbids all exercise.

The amount and character of clothing worn by the patient must be governed by his individuality, the season and the climate, avoiding heavy woolen shirts and chest protectors at all times. If wool is worn let the garment be light and porous. Many of our phthisiotherapists are becoming very enthusiastic over linen underwear for all seasons.

Good food and an abundance of it, in fact causing the sufferer to assimilate more than he expends is a most important factor in the successful treatment of pulmonary tuberculosis.

A mixed diet such as meat, milk, butter, eggs, vegetables well seasoned with salt, bread preferably that made of unbolted flour and at least one day old, cereals and fruits, particularly grapes, should meet the demands of the most exacting when appetizingly prepared. A glass or two of some dry wine is relished by, as well as beneficial to some patients.

The curative remedies, past and present in form of drugs are almost innumerable, and with a few isolated exceptions, all equally valueless. The few remedies having merit are cod-liver oil, the hypophosphites, arsenic in some of its forms, strychnia and iron. These for their tonic and supporting properties have best stood the crucial test of time and experience. Creosote and some of its modifications, such as the carbonate, when given to certain patients in moderate doses or from one to twenty-five drops in milk three times daily, is of undoubted benefit; discontinuing the remedy the moment the stomach manifests the slightest indication of rebellion.

I have in the past used both the excessive and moderate dosage of pure Beechwood creosote with decided benefit, yet after carefully comparing my notes of cases so treated, I am convinced that for obvious reasons the moderate dose long continued yields the best results.

For the dyspeptic symptoms, *Nux Vomica* with some form of pepsin answers very well.

Caroid has yielded most satisfactory results when administered by myself in these cases; in fact I prefer it in connection with charcoal to all other remedies.

Diarrhoea and constipation are largely controlled by the character of the food, with the judicious use of cascara, or occasional broken doses of calomel, for the more obstinate cases of constipation.

For relief of the painful and dry cough, Heroin or Codein with muriate of ammonia (I prefer heroin for its less constipating tendency) is almost a panacea.

Phthisical subjects often complain of an intercostal form of neuralgia that is very aggravating in its nature. Counter irritation in some form or other will secure prompt relief without resorting to the hypodermic use of morphia. Should pulmonary hemorrhage arise, rest, ergot, atropine and cold applications usually give prompt relief, most important of all is the assurance given the patient that the disease is not necessarily fatal on this account, and a note of warning accompanied by this assurance, if given prior to their appearance has a most quieting and salutary effect. To overcome the shock resulting therefrom rectal irrigation with hot normal salt solution has a happy influence in establishing a favorable reaction.

Excessive febrile action is best controlled by rest, judicious sponging of the body with water, and if these fail, Antipyrine, Phenacetin or Acetanilid may from time to time be resorted to. Further our success in controlling the febrile condition determines the degree of suffering from night sweats.

Milk or some form of nourishment before retiring, with a glass of milk administered during the night should the patient wake up weak, exercises a controlling influence over this condition; in event of failure, Alcohol baths, Agaracin and atropin should be resorted to.

Pulmonary Gangrene sometimes complicates these cases and should receive prompt and vigorous treatment, resection has given satisfactory results in some instances.

Moderate exercise short of weariness, or causing the slightest perspiration, unless pre-

cluded by a febrile condition is beneficial. Should the patient accidentally perspire, even with the exercise of extreme care, his undergarments should be at once removed, the skin rubbed dry, and the sufferer put in bed for a few hours.

Nine hours rest should be allowed every sufferer from pulmonary tuberculosis as the minimum. Pleasant and congenial occupation will help the patient pass many an otherwise tedious hour. Interest him in the why and wherefore of his case, and if he is endowed with a fair degree of intelligence, by so doing you will have taken a long step toward his recovery, by thus making him your ally and co-worker. Such at least has been my experience. Cheerful companions or none at all, eschew every factor that tends to make him morbid and pessimistic.

In fact the successful home treatment of pulmonary tuberculosis is educational and prophylactic in the truest sense of the term, and when once a cure has been effected a regular and as far as possible outdoor life should be insisted upon.

Owing to the nature of the disease, its chronicity and believed fatality, more especially from the lay standpoint, does the personality of the physician, his skill, devotion, sympathy, will power, patience, and the ability to control the minds of men, particularly those in the peculiar psychological state of all consumptives, enter as a paramount factor contributing to his success. In fact mental therapeutics and suggestion exercise a marked influence in these cases.

The beneficial influences of certain climatic conditions over particular forms of pulmonary tuberculosis is unquestioned, yet that there exists any climate possessing specific curative qualities for any form of the disease, I am not prepared to believe or admit.

The practice of sending patients in the last stages of tuberculosis away from home, too often resorted to by many physicians, after having exhausted every means as they think at their command to control the disease, is but a refined form of cruelty, resulting only

in a more rapid progress of the disease, and ultimate death among strangers.

While it is an admitted fact, that cures obtained in home climates, although the climate may be lacking in some desirable features possessed by foreign sections, the results are more lasting in their nature, an argument of great weight when discussing the possibilities of recovery with our patients in moderate and poor circumstances, to whom a long sojourn away from home would prove a hardship, if not an utter impossibility. Hence the mind is relieved of its craving for the imaginary good of the unattainable and the element of hope fostered.

Authorities Consulted: Osler, Lartigau, Berg & Knopf, Illinois Vital Statistics, Butler, etc.

Discussion.

Ethan Allen Gray, Chicago: I would like to call your attention to an early differential sign in tuberculosis in the very earliest stages. Deep pressure over the apex of the affected side will cause a deep seated pain referable to the posterior portion of the lung as low down sometimes as the angle of the scapula. This symptom is found only in the acute cases and is believed to be due to the congestion and the sensitive condition of the lung. After consolidation has occurred this symptom cannot be elicited. That has been found to be a very valuable sign, especially in examining applicants for life insurance.

I wish the essayist had given us his opinion or his experience in the use of the sera, as for instance, tuberculin. I have used tuberculin for the last two years and my results have been exceedingly satisfactory. I have found that with the use of the tuberculin I can get my patients in such shape that I can safely send them away for out-door treatment. After all tent life or life in the open air is the ideal treatment for tuberculosis, but sometimes it is impossible to give the patient the benefit of that treatment because they are too weak to be moved. Cold air is no objection to the treatment because a lowered temperature will inhibit the action of the bacillus. I believe in cold air. The extremities can be kept warm by means of hot water bottles and hot drinks. Patients invariably tell me after a few days of this treatment that they can sleep but if they do not have the fresh air they suffer intensely from insomnia. No matter how cold the air is, that is just what they want. That fear of cold air is the hardest thing I have to contend with in the case of ignorant patients.

Dr. Lowrie (closing the discussion): I thank you for bringing out this point. It is exactly what I expected to give expression to when I came to the further details as to treatment, but for want of time I was obliged to curtail my paper considerably.

A REPORT OF THREE MEDICO-LEGAL CASES INVOLVING THE DIAGNOSIS OF PARANOIA.*

Also sometimes designated monomania, chronic delusional insanity and reasoning insanity.

BY SANGER BROWN, M. D., CHICAGO.

My present purpose is not to discuss *in extenso* paranoia, but merely to report briefly three medico-legal cases encountered in practice during the past year, in which the diagnosis mainly involved a consideration of that particular form of alienation; and finally to enunciate certain diagnostic criteria deducible from the histories presented.

CASE I. B. C. (Seen at Detention Hospital), aged 42 years, married, coal dealer, correct habits, general health and family history good; came to Chicago from Germany at the age of fourteen and soon after twenty started in business successfully for himself and proposed marriage to a former schoolmate, who accepted his offer, coming from the old country to consummate the ceremony. The union was a fruitful and happy one. Both were active and consistent church members, their clergyman often citing theirs as the model family of his rather large congregation.

About two years prior to the date of my visit, B. C., returned home, not by design, but quite unexpectedly however, and found D. alone in the family bedroom with his wife; the children all on the floor below by order of the mother, and she sitting on the bed, which had the appearance of having been used; D's clothing was disarranged. Now D. had gone to school in the old country with both B. C. and his wife and had accompanied the latter on her voyage to this country; and B. C. had given him work some years before, which threw the suspected parties much together as B. C.'s residence stood in the yard where D. was employed. B. C. said he could have killed D. then and there, but refrained from making a scene on account of his family. D. never came to the house again, though he had formerly been a frequent visitor there.

After this B. C. frequently upbraided his wife for her frailty but did not speak of it to a third party till over a year later, when on the occasion of a social gathering at their home, he chanced to discover her in the arms of F. in a stairway, whereupon he shortly afterward confided his trouble to his clergyman and subsequently the wife confessed. All was peaceful until a few days later, when she told B. C. that the confession was a bogus one and that she had made it at the instigation of his mother and the clergyman in order to placate B. C.'s "fixed idea." This the clergyman denied *in toto*; at least in so far his connivance was concerned.

Now B. C. became more demonstrative than ever, at times loudly taunting and denouncing his wife before the children, even insinuating to her that one of them, differing in appearance from the others, was the offspring of D. and that possibly their illicit relations had begun as they voyaged together to this country, and he likewise recalled incidents which he thought gave support to this hypothesis. Finally his fellow deacons tried to heal the breach, but without success. The congregation divided on the subject and B. C. was summarily arrested while at work and taken to the Detention Hospital.

The hearing in court developed no material facts in addition to those stated. I felt warranted in testifying that the charge of insanity had not been sustained, * because, even though B. C.'s conclusions might have been unwarranted, his accusations were based wholly upon and never extended beyond the two incidents above named. No evidence was forthcoming, and I sought carefully for it, of any vague or general suspicions either before or after these occurrences. B. C. was acquitted, has since lived apart from his wife, but contributes fairly to the support of her and their children and attends to business as formerly; but his opinion regarding his wife's infidelity remains unchanged.

CASE II. G. H. (seen at a private sanitarium, where he was in custody pending trial), aged 54 years, married, practical mechanic, inventor and successful manu-

*Read at the Illinois State Medical Association April 29th, 1903.

*This diagnosis may seem to contradict the title of the paper.

facturer. Correct habits, general health and family history good. Married happily in early life and has three married children. Though they have lived in amity, his wife states that she has always had to reckon with his excessive jealousy in her social relations.

Two or three months prior to the date of my visit, G. H. conceived the idea that his wife was practicing masturbation, observed her narrowly and thought her attitudes and movements, especially in bed, supported his suspicions; would lie awake in an adjoining room at night listening; secured a powerful flashlight which he turned upon her frequently while she slept, in order to take her unawares and define accurately her position. Finally told her he was certain she was a confirmed and almost constant masturbator and begged her to go to a sanitarium for treatment.

Several weeks were consumed up to this point, at which time he likewise confided his suspicions to one of his sons-in-law, and added he was certain his wife was also having sexual intercourse with her house dog. Matters went on thus till about a week previous to my visit, when at their summer home, where she was staying with her children, he accused his wife of criminal intimacy with K., a gentleman neither he nor she had ever met, and cited certain noises he heard about the house at night as confirmation of the charge. He shortly told his son-in-law he was certain by the way his wife looked at men generally and the way her glances were returned, that her sexual irregularities and marital infidelity were commonly known; he was greatly exasperated when his confidante ridiculed his stated convictions.

Finally, a day or two later, the family having assembled in the sitting room, he appeared at the door with a loaded pistol in each hand and opened fire, saying excitedly that he would compel them to listen to him. He did not appear to be actuated by anger against his wife and did not aim at her particularly. Fortunately he was overpowered before any one was hurt, though one of the bullets passed through the sleeve of a member of the group. After his arrest, which immediately followed, he made several

conflicting statements regarding his purpose in shooting. To me he admitted it was very foolish, but firmly maintained the correctness of the convictions above expressed.

Obviously here the delusive conceptions and conclusions germinated and flourished altogether upon a pathologic activity of certain cerebral neurones or essential cerebral elements. In other words, they rested entirely upon a subjective basis; hence a diagnosis of insanity might be confidently pronounced.

Incidentally, pending the legal proceedings, G. H. had a large and painful hemorrhoid removed—he had been troubled with piles more or less for many years—and on recovering from the anesthesia his delusions appeared to have vanished. He apologized to his wife, who was present, and three weeks subsequently the legal proceedings were dismissed, no recurrence of his delusive ideas having been manifested in the meantime.

CASE III. L. P. (appeared in court as defendant in a charge of insanity preferred by the members of his immediate family), aged fifty-four years, merchant, married, three grown children; habits correct, general health and family history good, except that two maternal uncles became insane after middle life.

In his early 20's married a charming and estimable young lady of distinguished family and lived happily with her until about three years prior to the above date, when the shadow about to be described first fell across their path.

L. P. developed the idea, without any alteration of conduct on her part, that his wife was unfaithful to him; that she kissed her brother-in-law, a venerable clergyman, in a suggestive manner and quite unlike she had done before; and that further, she lodged him in their house on an occasion when he paid them a visit, as he frequently did, with a view to having illicit sexual intercourse with him: that generally she admitted men surreptitiously and indiscriminately to the house for the same purpose, even specifying mechanics who were making repairs; and that his daughter, a girl of 18, and his mother-in-law, a lady nearly 80,

who lived in his home, were cognizant of his wife's transgressions and aided and abetted her in them. After he had pledged them to strict secrecy, the coachman and a housemaid were offered a large sum if they could furnish conclusive evidence of his conviction, and he showed them how to spy unobserved into certain rooms where he suspected his wife habitually participated in illicit sexual orgies. Later he confided his conviction to his grown son and asked him to carefully watch the rear of the house at night to see if men—no particular man—did not surreptitiously enter. He smelled his wife's menstrual napkins to determine whether or not he could determine an odor of semen upon them, claiming that he could do so—thus to his own mind conclusively confirming his suspicions. In company with his wife met a mutual friend at a golf club and knew by the glances exchanged that they would remain at the club house and cohabit while he was out on the course playing.

Afterward sent a telegram to a favorite relative living a thousand miles distant, to meet him half way, as he had something of vital importance to communicate. At the meeting he related the above and much more of a similar nature as facts about which there could be no doubt. His relative accompanied him home, and with the co-operation of others succeeded in getting him to retract his charges, become reconciled to his wife and take a trip for his health. This partial remission of his delusions occurred about eight months from the date of their first appearance. He returned home after about two months absence, having while away, however, occasionally thought he was being watched by detectives. A few weeks after his return his delusions recurred with full force and continued up to the time of the trial. In the meantime, he made several extended trips abroad, at times thinking he was in imminent danger of arrest and incarceration; sometimes even disappearing and concealing his whereabouts for several weeks together. Finally, shortly before the hearing, he ordered the proper allowance he had formerly made his wife reduced to a mere pittance, and stipulated further that she might only receive this on condition that

she take up her residence outside the city limits, asserting that her conduct justified him in forcing this humiliation upon her.

Many business acquaintances testified that they had known L. P. for many years; had met him during the period covered by this investigation, and had never seen anything in him indicating insanity. And indeed, it may be here stated, that in none of the three cases under discussion was there anything in the demeanor, deportment or *general* conversation suggestive of mental derangement. To the casual observer there was no noticeable impairment of judgment or any of the mental faculties. Hence it not infrequently happens that a petition for the application of legal restraint to such patients is denied by a jury, which thus perhaps unwittingly permits the perpetration of a terrible but preventable tragedy.

For the reasons stated in the preceding case, I had no hesitation in testifying that L. P. was insane, and further, that his expressed attitude relative to the reduction of his wife's allowance afforded ample ground for apprehending that he might make a homicidal attempt upon any of the parties concerned in his morbid convictions. The jury disagreed, and after a few weeks L. P. in the meantime having made a division of his income satisfactory to his family, the legal proceedings were dropped. He, however, still retains his delusions as before.

The essential diagnostic problem in these cases was whether the particular ideas in question were conceived and elaborated on a basis of objective data, denoting cerebral reactions not inconsistent with those natural to the individual; or whether they were wholly or essentially subjective, the product of autogenous pathologic cerebral activity. In either case, the conclusions reached might be ever so erroneous—delusions, indeed; only in the latter, however, could they properly be designated as *insane* delusions. If these criteria are kept clearly in view, the difficulty of reaching a correct diagnosis in these cases may, I think, be to some extent simplified.

Though Cases II and III are clearly illustrative of the inception and early course of paranoia, and happen to exhibit many singu-

lar similarities, it would be erroneous to infer that they represent the most usual type of that disorder. It commonly commences in early life, even during adolescence, and while the delusions frequently involve some phase of the sexual sphere, this is by no means constant. Indeed the range and strength of the delusions present almost infinite variations when a large number of cases is examined. All, however, and I think this may be applied to insanity generally, exhibit in common the criterion cited above. That is, to repeat, the delusions rest upon a subjective basis, represent a morbidly autogenous manifestation of cerebral energy. In fact, the cerebral disturbance may be so great as to give rise to hallucinations of the special senses, morbid activity of the cortical centers related to the organs of special senses, being erroneously accepted by the patient as the normal exercise of these organs.

The character of the delusions and the temperament of the individual in which they occur determine his conduct. Some of the subjects of this disorder, after having learned by experience that assertion of their peculiar convictions means deprivation of liberty, are able to repress them and live at large, sometimes even conducting an extensive business successfully; while others comprise the most dangerously homicidal patients ever encountered in the wards of a hospital for the insane.

Though subject to some fluctuations, or even complete remissions in its early stages, when the disease is once fairly seated permanent recovery is exceedingly rare.

100 State street.

Marriages and Deaths.

Marriages.

- Lewellys F. Barker Chicago to Miss Lillian Halsey, Baltimore, Oct. 29.
 L. Read Brown, Chicago to Miss Harriet Swiney, Irving Park, Nov. 21.
 Clark A. Buswell, Chicago to Miss Emma Rink, Elgin, Nov. 4.
 Robert N. Butler to Miss Anna Burke, both of Butler, Nov. 21.
 Richard Lawrence Campbell, East St. Louis to Miss Leva A. Crane, Pekin, Oct. 29.

- W. W. Coleman, Lawndale to Miss Bida Dunham, near Lincoln, Oct. 14.
 Robert James Christie, Jr., to Miss Edith Eliza Turner, both of Quincy, Oct. 26.
 Edwin K. Dinges, Pekin to Miss Margaret Alice Wood, Decatur, Oct. 22.
 Roy S. Donaldson, Maywood to Miss Elizabeth Wolfe Giles, Oak Park, Oct. 12.
 A. H. Flickwir to Miss Nettie F. Gunn, Marshall, Nov. 3.
 W. M. French, Chicago to Miss Mabel Shelton, Macon, Mo., Sept. 24.
 Roy H. Garm, Beardstown to Miss Leila Drennan, Taylorville, Nov. 11.
 August E. Kroening, Lincoln to Miss Nellie Bellmar, Springfield.
 Herman Carl Merker, Chicago to Miss Nina A. Williams, Rochester, N. Y., Oct. 14.
 Benjamin D. Mosher to Miss Minnie Hess, both of Troy Grove, Oct. 23.
 John J. Muldoon to Miss Johanna Isabella Dwyer, both of Chicago, Oct. 19.
 Charles W. Pfeifer to Miss Theresa Golm, both of Quincy, Sept. 30.
 Travis Scott, Pleasant Plains to Miss Witty, near Newmanville, Oct. 14.
 Homer Samuel Warren, to Miss Charlotte A. Van Housen, both of Chicago, Oct. 15.

Deaths.

- Baker, George C., Greenville, Oct. 9, aged 42.
 Bjorkman, David A. T., Evanston, Oct. 14.
 Brand, Mathias, Chicago, Nov. 21.
 Brydon, James M., Chicago, Sept. 29, aged 59.
 Diven, Adelia Barlow, Nov. 7, 1903, aged 59 years 6 months.
 Hutton, Wm., of Elizabeth, was drowned in the Apple River, Nov. 22. Dr. Hutton was Vice President of the Jo Daviess County Medical Society, and a man universally esteemed. The Society attended his funeral in a body. He was 58 years of age.
 McDavitt, Virgil, Quincy, October 2, aged 74.
 McIntyre, Andrew Jackson, Galatia, Oct. 2.
 McKinney, David Rector, an old practitioner of Champaign county, Ill., and some-time President of the County Medical Society, in Gifford, Ill., Sept. 29, aged 66.
 Ridgeway, Emanuel, Morris, Oct. 17, aged 71.
 Smith, Marsh H., Manchester, Oct. 16.
 Taylor, Jesse, Vermont, October 2, aged 30.
 Thompson, Lucius Gillette, Lacon, one of the oldest physicians in the State, died at his home on Friday, aged 82. After graduating at Columbus, Ohio, in 1849, he drove across the country with a horse and buggy, looking for a place to locate. Arriving at Lacon in the summer of 1849, he located there, and had been in continuous practice up to the time of his death. In 1850 he, in company with Dr. Boal (who died last June in his ninety-sixth year), drove to Springfield, to help organize the State Medical Society, of which he was a life member. In 1900 they went together to celebrate the semi-centennial, being the only living charter members.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

EDITOR—George N. Kreider, A. M., M. D., Springfield.

DECEMBER, 1903.

THE LAW AUTHORIZING PUBLIC ACCOUNTANTS.

Contrary to our usual custom we give a place in the monthly list of New Incorporations to an organization not strictly of a medical character. The organization in question is the Illinois Society of Public Accountants and as far as we can learn it represents about fifty persons who are authorized to assume this title by virtue of an act to regulate the profession of public accountants, passed by the last general assembly. There are so many things in this law and the fact of its passage and approval by the governor of interest to the medical and dental professions that we give the text of the act in full.

* * * * *

Probably it will be well to recall the fact that certain large bodies of professional men viz. the State Medical Society and the State Dental Society went before the last legislature asking that better statutes regulating those professions be placed on the great books of the commonwealth and at the same time certain citizens, very few in number, and not organized until this month also asked for a law authorizing the title of Public Accountant in Illinois.

* * * * *

The object of the law creating Public Accountants is to protect professional accountants from the invasion of certified Public Accountants from the states of New York, Pennsylvania and Massachusetts which states had passed laws creating these officials there-

by giving them opportunities of transacting business for large and wealthy corporations. The professional accountants of Illinois have heretofore been prevented from acting for these corporations because they have had no standing in law. The law seems to be a perfectly proper one and we are glad it is on the statute books.

* * * * *

What we desire to call attention to is that the law authorizing public accountants which is printed in full below is very much such a law as the medical and dental professions would have been pleased to have enacted for their protection. It includes a reciprocity feature, a penalty for assuming a title wrongfully and a revocation clause, which appear in many respects admirable.

* * * * *

A careful consideration of this matter will show that this small number of unorganized citizens have obtained an excellent law and that two large societies of representative professions not only failed to get their laws on the statute books but were declared in an unusual and offensive manner to be dangerous to the safety of the commonwealth should they (the societies) be permitted to have some little voice in managing the laws which particularly affect them.

* * * * *

When the time comes for the Medical and Dental Societies to take up again the work of securing a Board of Examiners it will be well for the respective committees to consider the provisions of this act. In the mean time our

members will consider the matter and draw their own conclusions.

An Act to Regulate the Profession of Public Accountants.

Section 1. Be it enacted by the people of the State of Illinois, represented in the General Assembly: That any citizen of the United States, or person who has duly declared his intention of becoming such citizen, having a place for the regular transaction of business as a professional accountant in the State of Illinois, being over the age of 21 years, of good moral character, being a graduate of a high school, with a four years' course or having had an equivalent education, and who shall have received from the University of Illinois a certificate of his qualifications to practice as a public expert accountant as hereinafter provided, shall be styled and known as a "Certified Public Accountant," and no other person shall assume such title or use the abbreviation, "C. P. A." or any other words or letters to indicate that the person using the same is a certified public accountant.

Sec. 2. The University of Illinois shall determine the qualifications of persons applying for certificates under this act, and shall make rules for the examination of the same, and for this latter purpose shall appoint three examiners, at least two of whom shall be skilled in the practice of accounting and actively engaged therein in the State of Illinois, and the third shall be either an accountant of the grade herein described or an attorney skilled in commercial law. The time and place of holding the examinations shall be duly advertised, for not less than three consecutive days, in one daily newspaper published in each of the places where the examinations are to be held, not less than thirty days prior to the date of each examination. The examination shall be in "Theory of Accounts," "Practical Accounting," "Auditing," and "Commercial Law," as affecting accounting. The examinations shall take place as often as may be necessary, in the opinion of the University, but not less frequently than once a year.

Sec. 3. The University of Illinois may, in their discretion, under regulations provided by their rules, waive all or any part of the examination of any applicant possessing the qualifications mentioned in Section 1, who shall have had five successive years' previous experience as a public accountant previous to the date of application, who shall apply in writing, within one year after the passage of this act, and who shall have been practicing in this State as public accountant, on his own account, for a period of not less than one year next prior to the passage of this act; also, to any person who shall have been actively in practice as a public accountant for not less than five years next prior to the passage of this act, outside of the State of Illinois, who shall have passed an examination equivalent in the opinion of the University of Illinois, to the examination to be held under the provisions of this act.

Sec. 4. (a) The University shall charge for the examination and certificate a fee of \$25, to

meet the expenses of such examinations. This fee shall be payable by the applicant at the time of filing his application. (b) The examiners appointed by the University of Illinois shall be paid for the purpose of this act for the time actually expended in the pursuance of the duties imposed upon them by this act, an amount not exceeding \$10. per day, and they shall be further entitled to their necessary traveling expenses. All expenses provided for by this act must be paid from the receipts under this act, and no expense incurred under this act shall be a charge against the funds of the University. (c) From the fees collected under Section 4, the University of Illinois shall pay all the expenses incident to the examinations held under this act, the expenses of issuing certificates, the traveling expenses of the examiners, and their compensation while performing their duties under this act.

Sec. 5. The University may revoke any certificate issued under the provisions of this act, for unprofessional conduct or other sufficient cause, provided that written notice shall have been previously mailed to the holder of such certificate twenty days before any hearing thereon, stating the cause for such contemplated action, and appointing a date for a full hearing thereof by the University; and, provided further, that no certificate shall be revoked until a hearing shall have been had.

Sec. 6. If any person shall represent himself to the public as having received a certificate as provided in this act, or shall assume to practice as a certified public accountant, or use the abbreviation C. P. A., or any similar words or letters to indicate that the person using the same as a certified public accountant, without having received such certificate, or if any person having received a certificate as provided in this act, and having thereafter lost such certificate by revocation as herein provided, shall continue to practice as a certified public accountant, he shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined a sum not exceeding two hundred dollars for each offense; provided, that nothing herein contained shall operate to prevent a certified public accountant who is the lawful holder of a certificate issued in compliance with the laws of another State, from practicing as such within this State, and styling himself a certified public accountant.

ARE ALL DISEASES CAUSED BY PATHOGENIC GERMS OR THEIR PTOMAINES? CAN ANY RECOGNIZED DISEASE BE CAUSED BY MORE THAN ONE BACTERIUM OR ITS PTOMAINE?

In the preceeding number of this Journal attention was called to the fact that during the last one or two decades of time, the attention of medical investigators and writers have been so engrossed in efforts to find some one pathogenic germ as the exciting cause

of each disease and some specific remedy or anti-toxine for each germ as to develop several important evils affecting both the literature and the practice of the profession. As intimated in the closing paragraphs of the preceding article it has greatly lessened attention to the predisposing causes of disease; and has equally diminished attention to the therapeutic indications in the successive stages of each disease, by giving some supposed specific antiseptic, anti-toxin or anti-toxic serum, in all stages of the disease. In the same proportion, it has increased the professional skepticism regarding the efficacy of drugs, and has greatly increased the list of so-called contagious diseases by calling every disease contagious, with the development and progress of which some pathogenic germ could be identified. Consequently tuberculosis, pneumonia, influenza, typhoid and other fevers, were declared to be highly contagious and requiring isolation, disinfection, and the use of germicides or anti-toxins as the chief agents in their treatment. All the leading symptoms were attributed to the influence of the specific micro-organism or its ptomaine, and the chief danger to its depressing or paralyzing effect upon the heart. The words contagion and infection were used indiscriminately by health officers, sanitarians and medical societies; and were applied equally to smallpox, measles, diphtheria, typhoid fever, pneumonia, tuberculosis, and almost every other disease supposed to be caused by pathogenic germs or their ptomaines. By doing so, they increased the fears, mental apprehensions and anxieties of all classes of people sufficient to cause a marked increase of nervous and gastric disorders of all kinds. For by calling all diseases propagated by pathogenic germs, contagious there are but few populous communities in which some one or more of such diseases are not present at all times. And as the people

generally regard a contagious disease as one that so poisons the air immediately surrounding the persons sick, as to endanger communicating the disease to every unprotected person coming into their presence, in the same manner as smallpox and other eruptive fevers are communicated, large numbers are living in daily fear lest they or their children should come in contact with someone afflicted with contagion. This is especially true since influenza or lagrippe, pneumonia and pulmonary tuberculosis have been declared to be highly contagious, not only by health officers, but also in the medical and secular press, and in public meetings in many parts of this country and Europe.

That habitual mental anxiety or fear from any cause, exerts a disturbing or depressing effect upon all the functions of the living body, few who have given any attention to the subject will deny. That such depression constitutes a decided predisposing cause of disease has been abundantly demonstrated during the prevalence of all severe epidemics. And the additional amount of both mental and physical suffering occasioned by the constant promulgation of the doctrine that tuberculosis, pneumonia and influenza are highly contagious, by simple contact or presence, is not easily estimated.

A *contagious* disease is one that causes the living body affected by it, to exhale or emit a specific poison sufficient to so impregnate the air immediately surrounding the patient as to communicate the same disease to any other unprotected person inhaling it. Such are variola, varicella, rubeola, scarlatina, etc.

An *infectious* disease is not propagated by emanations impregnating the air directly surrounding the patient, but by pathogenic germs or infective material evolved in the blood and excretions of the sick and communicable to others either by direct inoculation or by the use of contaminated food or

drink. The most familiar examples of this class are syphilis, tuberculosis, continued fevers, cholera and plague.

The contagious group of diseases are communicable by simple contact or presence in any climate, at any season of the year, and in the midst of the most perfect sanitary surroundings. On the other hand, the infectious group are communicable only by the introduction of the infective matter either by inoculation as in syphilis, or by the presence of impure air, unwholesome food or drink, depressing mental emotions, or the presence of special epidemic conditions of the atmosphere.

So long as a healthy individual is surrounded by pure air, uses only wholesome food, good water, takes a fair amount of outdoor exercise, and is free from any persistent mental anxiety or depressing mental emotions his natural vital resistance to toxic agents will enable him to successfully resist the influence of all the pathogenic germs or ptomaines of tuberculosis, pneumonia, influenza, typhoid fever, cholera and other infectious diseases that he may come in contact with. But let the same person be required to spend the greater part of his time in badly ventilated and uncleanly rooms; to eat unwholesome food; to drink impure water or alcoholic liquors either fermented or distilled, or to be subjected to continuous mental anxiety, grief or despondency, and his natural vital resistance will become so impaired that he readily yields to the influence of whatever infectious germs or ptomaines he may come in contact with.

The several injurious conditions and influences just enumerated constitute the chief predisposing causes of the whole class of infectious diseases. And three-fourths of the decrease in the ratio of the mortality from the class of infectious diseases during the last half century, has been caused by dimin-

ishing the existence of those predisposing influences. A careful examination of past records will show that the decrease in the general ratio of mortality has resulted chiefly from the diminished mortality from bowel affections in infancy and early childhood by securing better ventilation and cleanliness in the homes, and during the hot months of summer, removing large numbers of them from the crowded centers of population to the purer air of healthy country districts, and the great diminution of mortality in both periodical and continued fevers including yellow fever and the plague throughout this country and Europe caused by the wider streets, greater cleanliness and better water supplies for cities, and more efficient sewerage for both cities and country districts, during the last half of the nineteenth century.

During the progress of the foregoing sanitary measures aided by demands for better ventilation in work-shops and factories and more daily open air exercise, the ratio of mortality from pulmonary tuberculosis had begun to decrease even before the tubercle bacillus had been discovered, and the rapidity of that decrease has been increased but little by the very active warfare waged for the extermination of that bacillus during the last decade or two. But while the foregoing sanitary measures have very much lowered the ratio of mortality, it has been as much by removal of the pre-disposing causes of disease as by lessening the existence of pathogenic bacteria. Indeed the most efficient mode of preventing the propagation of the bacteria is to so increase the natural vital resistance that no disease is produced by them. To accomplish this, there must be a better knowledge of what constitutes natural vital resistance to morbid impressions or agents, and in what way it can be increased. The consideration of this, however, must be postponed until next month.—N. S. Davis.

NEEDS OF THE STATE INSTITUTIONS OF ILLINOIS.

It is now 57 years since the State of Illinois began its series of public charitable institutions when it opened at Jacksonville a school for the deaf with five little pupils. Soon after the school for the blind was opened and the Central hospital for the insane and these three institutions, all at Jacksonville, comprised all the charitable undertakings of the State until after the close of the Civil war. Now their number has already reached 17 and no one is bold enough to foretell its future limit. Certain it is that all those institutions now in existence and all which may be developed are inevitably dependent upon the medical profession for inspiration and for the leadership which shall lift them above the level of enormous lodgings. State care for epileptics and for tubercular patients are much urged, and both are likely to be realized in the immediate future. Already the institutions shelter about eleven thousand persons and have cost the State more than forty-two million dollars. It may be well to rehearse the list as a basis for considering their needs more closely. They divide themselves naturally into groups: There are three institutions for the blind, the School for the Blind at Jacksonville, the Eye and Ear Infirmary at Chicago, and the Industrial Home for the Blind also at Chicago. There are three institutions for soldiers and their relatives, the Soldiers' Home at Quincy, the Soldiers' Orphans' Home at Normal, the Soldiers' Widows' Home at Wilmington. There are two reformatory institutions, the State Home for Girls at Geneva and the State Home for Boys (not yet opened) at St. Charles, in a miscellaneous group are included the asylum for Feeble-Minded Children at Lincoln, and the School for the Deaf at Jacksonville.

Last and most important numerically as

well as appealing to the medical profession are the seven institutions for the insane, the Central Hospital at Jacksonville, Northern Hospital at Elgin, Eastern at Kankakee, Western at Watertown, Southern at Anna, Asylum for Chronic Insane, Bartonville, and the Asylum for Criminal Insane, Chester. These institutions shelter about 7,000 insane patients and all observers will agree that the trend in Illinois is strongly toward State care for all insane. Thus while the problems now presented by our public institutions are urgent and important enough, it is plain that they must be considered with reference to their growth, rather than any future diminution of importance.

Julia C. Lathrop.

Correspondence.

A VERY PROPER COMPLAINT.

Vandalia, Ill., Nov. 25, 1903.

Editor Illinois Medical Journal,

Springfield, Ill.

Dear Doctor: I do not desire to make myself conspicuous by posing as a reformer of the medical profession but I would like to direct the attention of the readers of the Journal and medical writers in particular to an existing condition that all ethical physicians must say is a mixing of the "sheep and the goats."

Some time ago I received a sample copy of the October number of the Medical Brief that claims the largest circulation of any medical journal in the world. There were a number of short interesting articles by prominent men in the profession some of them professors in medical colleges and some of the members of the American Medical Association. Some full page portraits of authors also appeared but imagine my surprise when I saw an article on the "Successful Treatment of Hydrocele Varicocele and Rupture," by that notorious advertiser, B. F. Tomlin, of St. Louis, who makes monthly

visits to a number of town in Southern Illinois and advertises freely to the laity.

My curosimy being aroused I thought I would see what the advertising pages furnished. These included an illustrated advertisement of the Marvel "Whirling Spray" Syringe, the same cut as can be seen in almost any daily paper, a full page exploiting the virtues of the "Family Laxative" Syrup of Figs, which is also advertised in the daily press and a full page is given to B. F. Tomlin's Sanitarium. I am unable to say why there was not one page devoted to "Munyan's Paw Paw."

I also received a sample copy of the December number which contains a fourth of a page advertisement with a cut of Dr. Tomlin the same as the one I inclose, that was clipped from the Fayette County Democrat.

If medical writers would refuse to contribute articles to and medical readers refuse to subscribe for such journals we could eliminate these goats from the sheep.

Very truly yours,

Asa L. T. Williams.

RECIPROCITY.

Dr. B. D. Harison, Secretary of the American Conferation of Reciprocatig Examining and Licensing Medical Boards, has sent us a communication regarding the recent meeting of that confederation. We extract the following important letter from Dr. Reed on this subject. This subject will be considered farther in our next issue.

RECIPROCITY.

Letter from Dr. Charles A. L. Reed, of Cincinnati, O., ex-President American Medical Association, Chairman Legislative Committee, A. M. A.

Morley's Hotel, Trafalgar Square,
London, W. C., Oct. 13, 1903.

Dr. B. D. Harison,

Secretary American Confederation of Reciprocatig Examining and Licensing Medical Boards.

Sault Ste Marie, Michigan.

My dear Dr. Harison:

It was my confident hope and expectation to be with you at St. Louis not only personally but in my capacity as Chairman of the

Legislative Committee of the American Medical Association to participate in the proceedings of your most important conference. I am, however, much to my regret, detained in Europe and cannot sail in time to participate in your deliberations. I avail myself, however, of the opportunity to say that in the convening of the legal representatives of legally established licensing boards we have the first tangible effort in the direction of unifying, or rather standardizing, medical requirements in the United States. Under our National Constitution there can be no such thing as national licensures and I am very sure that no effort will be made by which the various states will surrender this phase of their police power to the central Government. Such an end could be reached only by a constitutional amendment which, even if it did not fail of passage by Congress, would never be ratified by the different states of the Union. While all of this is true the fact remains that the physician who is qualified to practice his profession in one state ought to be given the right by virtue of that fact to practice in all other states of the Republic. Anything less than this reduces citizenship from national to state significance, an idea which during the last forty years has grown exceedingly repugnant to progressive Americans. The only hope for relief under existing circumstances that I can see lies in the practical operating of reciprocity clauses in the various state laws. This, I am happy to learn, is likewise recognized by many members of your Confederation. It has occurred to me in the course of a reasonable and careful study of this question in its practical phases, that the chief obstacle to the operation of the reciprocity clause is to be found in an unfortunate jealousy of the examining prerogative by state boards. The statement often heard to the effect that reciprocal recognition of licenses cannot be established with a particular state because of disparity of requirements will, in many instances, fail of justification in the light of all the facts. The insistence upon uniformity in petty details, while ignoring the general educational value of requirements actually prescribed, is a distinct perversion

of the object and purpose of every reciprocity clause so far enacted in the United States. The time has come for an end to this as to other pretexts for thwarting the nationalizing of the medical profession, particularly that still more flimsy pretext that state reciprocity cannot be inaugurated because of the variation in the educational mechanism devised in the various states. It is not the machine but the products of the machine; it is not the details of the curriculum but the results of the curriculum with which the various communities are concerned. The people have established means of having guaranteed to them the qualifications of those to whom they entrust their health and they are interested in broad results rather than trivial incidents.

The position that has been taken by Michigan upon this question is to my mind an excellent one—one that should call for reciprocal action by every state that has evolved out of the period of incubation represented by preliminary registration laws.

Wishing the Confederation every success,
I am, Very sincerely yours,
Charles A. L. Reed.

ANOTHER VICTIM.

Orion, Ill., Nov. 12, 1903.

Illinois Medical Journal.

Dear Sirs: In this month's number of our State Journal I see a notice of someone else being caught by H. D. Easterly. I thought possibly I was the only M. D. in the State "*green enough*" to be caught. but he came into the office when I was in a hurry, said they were organizing this "Peoria Health and Accident Ass'n." That he was going in advance of the organizers, appointing medical examiners for the order, in each town, that they would organize a large Society, and make plenty of work for examiners and in order to get the appointment it was necessary to take the insurance, and he was taking the applications and money then so that the organizers who would be here in a short time would know who the medical examiner was and be all ready to go to work. My receipt is dated July 8th, exactly like the one printed in

the Journal. It appears to be a swindle, pure and simple. "Obtaining money under false pretense" and I have no doubt he has done the same with many more, who like me have kept quiet, rather than admit being caught by such a sharper. I have never heard of the fellow since, although I have written to Peoria and got no reply, neither have my letters been returned to me. Now if we could get all the "dupes" in the States together, and count up the pile he got, possibly it would be enough to hire a detective to hunt him down and put him where he belongs. I will willingly give mine to see him there. You need not publish my name, but in your next Journal ask all who are members of our State Society *caught in this trap* to show up. Hoping we may succeed in locating the party, I am

Yours truly,

PROTEST FROM DUBUQUE.

Editor Illinois Medical Journal:

Please give the enclosed letter space in your next issue. Very truly,

E. R. Lewis, Secretary.

Dubuque, Iowa, Nov. 13, 1903.

To the Medical Profession of Iowa:

At a meeting of the Dubuque Medical Society, held November 11, 1903, a resolution, was unanimously adopted disapproving of the plan of reorganization embodied in the Constitution and By-Laws said to have been adopted at the Sioux City meeting of the State Medical Society, and the undersigned were appointed a committee to present the reasons therefor to the profession and to co-operate with others of similar views in opposing such reorganization.

There are grave doubts as to the constitutionality of the proceedings by which the Sioux City Constitution was adopted. The old Constitution presented two methods by which it could be altered or amended, one of which was clearly not complied with. It is alleged by members present that the same is true of the other method, under the operation of which the proposed Constitution and By-Laws should have been "submitted at the

first session and read at such session" under which circumstances it might have been adopted at the last session if the vote were unanimous.

This is a matter of testimony and easily settled, but if it shall transpire that the action was not in accordance with the section for that purpose provided, the old Constitution is still in force.

It were well if there should be such an easy solution of the matter. For, of the innovations chargeable to the Sioux City instrument, some are not only radical but radically bad among which the following may be specified:

1. Compulsory membership in the State Society and all its un-American, un-republican outgrowths; refusing membership in a local society to such as do not wish to be members of the State Society.

2. The whole scheme of organizing from above down instead of from below up, which thus reverses the normal law of growth of organized social and political bodies and is particularly obnoxious to an American citizen.

3. The "censor of his district" (see By-Laws VII, 2) with judicial functions, an intolerable and offensive naturalization of the walking delegate in the field of our home societies.

4. Abrogation of home rule, which in part might be conceded for the sake of the advantages of a properly constituted federation but which advantages are conspicuously absent in the proposed scheme or secured at too great expense.

5. The establishment of the Council, a body of ten members with a five years' tenure of office, amenable to no person or body, to whom are delegated extraordinary powers, from whose judicial decisions there is no appeal; who, in addition, are *ex-officio* members of the House of Delegates, of which they will form a large proportion, estimated at from twenty to thirty per cent. Such a centralization of power is not wise.

6. The entirely inefficient provision for a referendum (Constitution, Article X) viz.: that upon questions pending before the House of Delegates, the general meeting of

the Society may order a general referendum which the House of Delegates may (or may not at their pleasure) submit to the general membership! A shadow of referendum without its substance.

The above specifications do not exhaust the list of objections to this instrument, which in its literary make-up, in the impossibilities it enjoins and prohibits, in its self-contradictions and inconsistencies attest a hasty and careless preparation, the adoption of which instrument would, on these counts alone, bring great discredit to the Medical profession of the State of Iowa.

We therefore earnestly request such of the county societies as have not reorganized to delay such action until they have carefully and critically examined both the State and the County Constitutions and By-Laws under which they are asked to organize. And we seriously ask those who may have already taken this step to reconsider their action.

We offer to demonstrate the justice of any of the criticisms contained in this circular upon which, for want of space, we are not able here to enlarge, and we invite correspondence.

Very respectfully,

John S. Lewis,

James R. Guthrie,

I. S. Bigelow,

Committee.

DR. FERRY REPLIES TO DR. BLAINE.

Editor Illinois Medical Journal:

I very much regret to note that Dr. J. M. Blaine, of Denver, Col., in a communication written to your Journal, and published in the November issue, (page 337), should regard my statements of the case of *eczema papillomatosum* reported in the October issue, (page 293), with so little sincerity.

The circumstances were exactly as the report of the case set forth. The patient had suffered with the disease in question for several weeks before he applied to me for treatment. I prescribed the ordinary remedies both local and constitutional under which he made no progress. The nodules in the *eczematous* field grew larger and more tender to the touch continually; whereupon, as set forth in my report of case, I placed him un-

der x-ray treatment, with results as heretofore reported.

The man today is going about his business free from the malady. This surely is better showing than the doctor made with his last case of said disease, the patient, according to his statement, having died the next day after he was *cured*.

This proves the old saw, that in some instances "the cure is worse than the disease."

The doctor presumably, with an inquiring and receptive mind, asks me to give him a list of diseases *not* curable with the x-rays. To be accommodating I will comply with his request. So far as my investigation of the matter is concerned, I have never read or heard of any one curing, or trying to cure, rabies, tetanus, cholera infantum, gonorrhoea or syphilis with this agent. Nor yet—to draw a little nearer the doctors specialty dermatology—I have never heard of its being used for scabies while including the last named disease, I do so with the suggestion, that when on some future day—after this new light shall penetrate the doctors understanding—and he

furnishes his office with an x-ray outfit, should he have a case of this disease or one popularly known as the seven-year variety, he give it a trial and report results.

Dr. Blaine's entire communication has the smack of insincerity and derision upon its face; but, his comparing the x-ray and its therapeutic value with the fads of Eddyism and Osteopathy which he alleges has had its day in Colorado, and predicting that in the process of time it will fall into disuse and oblivion even as they have done, is the climax of unreasonableness and inexcusable or willful ignorance; and, one cannot help wondering how it happens that he is now occupying a position in which capacity it is incumbent upon him to deliver a course of lectures to a body of medical students.

However, there are some, otherwise intelligent men in the medical profession who still hold out against vaccination and the use of antitoxin, and, when we remember this we cease to wonder at Dr. Blaine's position regarding the therapeutic value of the x-ray.

L. A. Ferry, M. D.

Geneva, Ill., Nov. 19, 1903.

County and District Societies.

Macoupin County Medical Society.

Meetings are held in April and October. Membership 22.

Officers.

President L. H. Corr, Carlinville
Vice President N. A. Crouch, Chesterfield
Secretary J. Palmer Matthews, Carlinville

The Macoupin County Medical Society met in the Masonic Reading Room, with the following members present: L. H. Corr, C. J. C. Fischer, J. P. Denby, E. A. Bleuler, J. P. and J. Palmer Matthews, of Carlinville; A. G. Kinkead, H. W. Gobble, of Greenfield; George A. Wash and C. E. Smith, of Palmyra; G. E. Hill, of Girard; L. M. Nifong, of Modesto; S. A. Huffman, of Chesterfield; W. A. Trout, of Atwater; F. H. Charles, of Shipman.

The treasurer's report showed \$4.15 in the treasury.

The following named doctors were proposed for membership and were duly elected: W. E. Range, of Palmyra; W. Vanwormer and A. H. Simmons, of Girard; J. W. Thompson, of Nilwood; C. R. Bradley, of Modesto.

In accordance with the State Medical Society By-Laws, of which we are an affiliated

branch, we made out an official list of active members, containing 22 names. There are 41 doctors in the county not members of the State Society. We hope to bring them into the fold.

The censors reported Carlinville as the next place of meeting. Essayists: J. W. Thompson, of Nilwood; W. E. Range, of Palmyra; W. W. Vanwormer, of Girard.

Dr. J. A. Egan, Secretary State Board of Health, was present on invitation, and on motion was extended the courtesy of the Society.

Dr. Egan informally discussed the sanitary and medical laws of the State. He spoke at length on the medical practice acts of 1887 and 1899, and compared them. He showed that while in the opinion of the medical profession the advertisements so frequently found in the daily press were unprofessional in character, the Supreme Court of the State had held that the Board is not empowered to revoke certificates on account of these advertisements.

As to the itinerant vendors, there is no question as to their liability under the law.

As stated in the law, christian scientists and others who treat without the use of drugs or material remedies, are not practicing medicine as defined by the Statutes.

Many questions were asked Dr. Egan in regard to the right of a physician to conduct a

drug store. Dr. Egan called attention to the requirements of a State Board of Pharmacy made in compliance with the law, which he stated seemed to be rigidly enforced. He called attention to the fact that while the druggists were quick to make complaint to the Board of Pharmacy about a physician, it was a rare occurrence for a physician to report the practice of a druggist to the State Board of Health.

In reference to the administration of the sanitary and medical laws, the Secretary paraphrased upon the remark made by Ex-Governor Palmer in his campaign, and said: "The State Board of Health is as strong as the law is strong, and no stronger, and as weak as the law is weak, and no weaker."

A special request was made by the Secretary that the State Board of Health be informed by physicians, either by letter, wire or telephone, of any violations of the medical practice act or of the health laws which might be brought to their notice.

Dr. Egan made a brief reference to the birth and death law of 1901, and showed that as its repeal was demanded in 1903, it was necessary to secure a satisfactory substitute. Through the efforts of the State Board of Health this was done. Through the courtesy of the physicians of the State the present law is being very satisfactorily enforced. The State Board of Health receives as many certificates of death as were sent to county clerks under the burial permit act of 1901.

A letter from Carl E. Black, who is President of the State Medical Society, was read, saying that they are making every effort to increase the interest and membership throughout the State.

The afternoon session was devoted to the reading and discussion of papers.

Dr. George Wash, of Palmyra, read a paper on **Treatment of Diphtheria:**

Diphtheria is one of the most fatally contagious diseases of children. It is not yet thoroughly proven to be due to a specific micro-organism, but is a constitutional disease with a local manifestation.

The most fatal course is when the larynx and air passages become involved, causing diphtheritic croup, when suffocation is added to the already existing ptomain poisoning.

The time when Diphtheria originated dates to before the Christian Era. Arentaeus, of Greece, gave a clear description of the disease about the beginning of the Christian Era. Galen in the second century alludes to it. No records are found from the fifth to the sixteenth century; since which time it continues to be frequent and fatal. It was brought to America by Europeans, the first cases being in Boston in 1638.

In my practice, a fatal case occurred after a traumatic injury to the big toe—the boy only living about thirty-six hours, when the wound was covered by a tough membrane and the boy died with a fever of 104.5 degrees. Other members of the family recovered from Laryngeal Diphtheria.

Treatment: My success with Anti-Toxine

alone has been bad. By the advice of Dr. Faith, of Palmyra, I tried a prescription which has saved many children's lives:

R Potasii Chlorate, gr. xx; Acidi Hydrochlorici, gtt. xii; Tr. Belladonnae, gtt. xx; Aqua Q.S. ad 32.

M. Sig. Teaspoonful every 3 hours.

For croup, I give 1 to 4 gr. of the following, every 3 hours:

R Pulv. Ipecac, gr. xv; Potassi Nitratiss; Sachara Lactis; Ext. Glyceriza, aaA 311.

For rapid weak heart, I give 2 to 6 drops of Tr. Nux.; Tr. Columbo; Tr. Gentian, and Tr. Hydrastis, equal parts.

This treatment has been successful in 5 years' trial.

L. M. Nifong, of Modesto. Subject, **Broncho-Pneumonia in Children:**

Broncho-Pneumonia is a circumscribed inflammation, confined to a single lobule, or there may be several foci of infection, affecting an entire lobe; caused by entrance of an irritant.

Lowered vitality is a cause, with illy ventilated houses and bad hygienic surroundings. Infectious diseases are predisposing causes.

The morbid anatomy is difficult to describe. The bronchioles are filled with muco-pus and epithelia. The walls are thickened with infiltrated leucocytes, and rarely extravasations of blood. There may be areas of uninfamed lung, and emphysema at the edge of the lung.

The prognosis of children is a mortality of 6 per cent.

The symptoms are varied and typical. At first there is a hacking cough, with rise of temperament, followed by dyspnoea, with respirations of 60 to 80 per minute, with pulse of 140. Coarse sonorous and fine siblant rales are heard over the chest. With consolidation comes bronchial breathing, which signs disappear rapidly with resolution. But friction sounds remain for weeks.

Nervous symptoms are frequent, but convulsions are rare, except in fatal cases. Slight delirium lasts during the height of the fever. Gastro-intestinal disturbances are troublesome, especially when bowels become distended with gas.

Treatment: Giving cough syrups should be deprecated. For troublesome cough give Ammonium Muriate, gr. xxx; Codein Sulp. gr. iii; FL Ext. Prunus Virg. 3ii; Glycerine 3ii; Aqua Q.S. ad 3iv. M. Sig. Dram every 2 hours.

For full pulse and high temperature, Aconite and Ipecac are indicated. Fever should be controlled by frequent bathing with tepid water. Good fever mixture to begiven every hour:

R Potassi Citratiss, gtt. x—xxx; Spts. Nitrous Aether, 3i to 3iii; Aqua q. s. ad, 3iii.

Heart stimulants are required, and I prefer Glonoin and Strychnine; also brandy is useful. A cotton jacket should envelope the chest. To allay cough and reduce temperature, Anti Phlogistine should be applied thick and hot over the affected area.

Be on the alert for complications.

E. A. Bleuler, of Carlinville, read a paper on **Some Things About Blood.**

Since the discovery of the circulation of the

blood by Prof. Harvey in 1628, much study has been given to its composition and function.

Its composition was soon learned, but its function is even today not fully understood.

The microscope has revealed the corpuscles and their relation to the living organism.

Blood is a living tissue, carrying nutriment to all parts of the body; and returning, it carries out the effete matter to the organs of excretion.

Bacteria find their way into the blood-stream, where they are destroyed by a process of Phago Cytosis, and their toxins are neutralized in the system.

Changes in the corpuscles of the blood are diagnostic of many diseases.

There are the two corpuscular elements—red cells or erythrocytes, carrying oxygen, and white cells or leucocytes.

The haemoglobin, normally in the red cells, is altered by many diseases, as is also their number.

The red cells are believed to be of two portions, coloring matter and a colorless stroma.

Their origin is the red bone marrow.

Pathology: In anaemia, the red corpuscles have a true amoeboid movement; also deformed shapes appear in anaemia, called Poikilocytosis.

Degeneration of the cell occurs in infectious fevers, such as Variola, Septic and Pyemic processes.

In these cases are seen amoeboid movements, deformed cells and degenerated fading of cell substance.

The Leucocytes or white cells are four kinds:

1. Non-Amoeboid cells, small in size. 2. Amoeboid cells, about twice as large as a red cell. 3. Amoeboid cells of indeterminate size, whose protoplasm is slightly granular. 4. Amoeboid cells, with one or more convoluted nuclei, with coarsely granular protoplasm.

The origin of the leucocytes is in the lymphatic tissues.

Leucocytosis is an increase in the number of either the polynuclear leucocytes in pathological conditions or the mono-nuclear leucocytes in physiological conditions. Leucocytosis is produced by irritation of infective principles. These substances exert either an attractive or repellant influence on the amoeboid white cells, called Chemotaxis.

A function of the leucocytes is to block the passage of the bacteria into the system.

The leucocytes produce substances called Alexins, which have an anti-toxic effect.

A differential diagnosis between an inflammation and the fevers of malaria and typhoid is made by examining the blood for leucocytosis, which is marked in inflammation and absent in the latter diseases.

In Pneumonia there is marked leucocytosis; also it is present in gastritis, and in Carcinoma of the viscera, where there is inflammation. In skin cancer there is no leucocytosis, but a recurrence of cancer after extirpation of the breast is first detected by marked leucocytosis. The malarial plasmodium can be readily detected in the nucleus of the red blood corpuscles.

The papers were received by the Society as

contributions and were discussed by all members present.

The Society then, on motion, adjourned until the 4th Tuesday in April, 1904.

J. Palmer Matthews,
Official Reporter.

Stephenson County Medical Society.

Regular Meetings are Held in Freeport, the Third Thursday of Jan., April, July and October.
Membership, 40.

Officers.

President J. A. Stealy, Freeport
Secretary R. T. Burns, Freeport

The Stephenson County Society of Physicians and Surgeons held its quarterly meeting, October 15, 1903, at Freeport, Ill., at 2 p. m. The meeting was presided over by J. H. Stealy, President, who, as incoming President, addressed the meeting as follows:

Members of the Stephenson County Medical Society: As your incoming President, it befalls me to say a few words to you. I am in hopes to instill some life and enthusiasm into our Society. It has appealed to me that we are far too indifferent, that we expect others to do all the work, that we are too prone to speak of the third person instead of the first person as being the accused if we fail to have interesting sessions. Many of us are timid to venture our first papers, but I assure you that after you have once broken the ice, you will find the work less difficult and infinitely more interesting. The writing of a paper is not only instructive to us, but far more to him who writes, as he is pretty certain to familiarize himself with the subject in hand. We learn from each other, no matter how great or small; though meagre our endeavor, we all have some originality as to new application of old ideas, and the old application of new ones, which in either case may be new to any of us. I have obtained some very valuable ideas in consultation practice. It is these apparent minor things that make the great greater. Again, we are prone to think, Oh, pshaw! there is no use attending these meetings, as I am perfectly familiar with the subject of the essayist." If so, this is just why we all wish to have you with us, to discuss the same.

Until quite recently Stephenson County Medical Society has been rather draggy and somewhat uninteresting, which meetings, I pray, are "has beens." I do not want to belive our material is poorer than that of nineteen-twentieths of other counties of the State, but we surely lack an awakening. It shall not be my aim to bring before these meetings lengthy papers upon topics that few, if any of us, ever expect to encounter. We shall see that it is the recognition of little things we have in every-day practice, that will give us superior skill. What made Ingersoll a great orator? His simplicity of language. And so it is with us, the quick recognition of the simple maladies and their proper treatment, to make us great physicians. We must also cultivate a better spirit in our profession, to overcome this un-

derhandedness to procure other physicians' patients. This will also help us arise from petty jealousies so common in the profession.

We, in our Society, have fallen into a rut, and have become very narrow and somewhat rusty with the methods of a more modernized Medical Society. Our by-laws may possibly need revision. Our by-laws should be published in booklets, and each member should be in possession of a copy. I shall, with your aid, endeavor to make our meetings interesting, socially as well as professionally, by the occasional importation of some well-known, up-to-date man, who will give us a talk upon some living topic, not always wholly necessarily upon medicine. I wish to call the attention of the Society to the utility of each member handing his or her paper over to the Secretary after having read it to the Society, which shall be properly placed on file for future reference. I also hope our Secretary will make a full abstract of all papers read, for publication in the Illinois State Medical Journal. I shall at some future time invite Dr. Ensign to be with us, whose duty it is to give us good advice.

I wish to thank the doctors who have so generously consented to present us with papers pertaining to my suggestions. My idea for having a symposium is that with all papers given at one meeting we can better look up the subject for discussion, and in the end will obtain a greater storehouse of usefulness of any subject than to have several subjects poorly discussed. As we all know, a paper well discussed is often more instructive and impressive than the paper itself. Again, in the future I hope none of you will refuse to give us a paper that the Committee or Society may suggest for a symposium. We will not hope to criticize your paper, as such, but may differ with some of your ideas expressed therein. If any of us know a better way of treating the case, we wish you to know it. No personal offense is intended by any such discussion.

Again I wish to impress upon this body the faulty methods we have fallen into in discussion of such papers. I make these little suggestions only as hints. I should be rather embarrassed to have some well-up Society man attend our meetings as crude, as they have been.

Fellows of the Society, I humbly beg your pardon, alluding to these little things, but, as we have seen, it is the little things in starting right which go to making the big ones, and that more mistakes are made by doctors in not looking than in not knowing. I shall, with your valuable assistance, make a desperate effort, and if I do not succeed in bringing the Society to a higher standing, I certainly shall think our cause is lost.

Thanking you kindly for my election as your President.

Minutes of previous meeting stood approved as read. J. S. Clark, of Freeport, and J. F. Linn, of Rock City, were elected to membership.

W. O. Ensign, of Rutland, was present and addressed the Society in the interest of the Illinois State Medical Society. He spoke of the work being done in other County Societies and

urged the necessity of active, healthy County Societies and their support to the Illinois State Society. Dr. Ensign's visit was appreciated by the members, who were glad to meet him and realized he is the right man in the right place.

On motion, K. F. Snyder, W. A. Hutchins and R. J. Bunn were appointed to revise Constitution and By-laws of our County Society.

E. H. Best read a paper entitled **Physiological Gestation**. The writer discussed the ordinary condition of the various organs in the pregnant woman, emphasizing the necessity for care in discovering abnormalities. He pointed out the necessity of urine examination and mentioned the proper dietary to be followed. The habit if the woman when two or three months from term of confining herself to the house was deprecated, and the idea of the more thoughtful care of the unborn as a class was commended.

W. A. Hutchins read a paper entitled **Abnormal Labor with Instrumental Delivery**. This subject was considered under the following heads:

1. Principles that govern in performing operations. A correct knowledge of normal to a complete understanding of abnormal mechanisms. Forceps the most common instrument used. Can never do injury if properly used, and they are life-saving to mother and child. He believes that forceps should be used upon impacted breech and upon head in head last cases. Indicated in one out of fifteen to eighteen cases according to the author's case. In consultation, once out of three cases. In a series of 631 cases of the author's, he used forceps in 52. In 57 consultations, forceps were used 15 times. In the New York Lying-In Hospital, 1902, there were 2,096 births, forceps being used 167 times or a proportion of 1 to 16.

2. Diagnosis of position is very important.
3. Posture. Lithotomy position is the usual one.

4. General rules of application.

5. Advantage of the Axis traction forceps.

6. Amount of force to be used. According to Jewel, a force of more than 70 should never be used; 25 to 40 pounds is generally enough.

7. How long to wait before applying forceps. If head engaged and no indication for immediate delivery, wait 5 or 6 hours. If head in pelvic cavity, and no advancement, wait only one hour and use forceps. He suggests the use of forceps as rotators where the head has refused to rotate. In cases of failure of delivery of head in head last cases, the forceps are very often useful. In impacted breech, the author advocates very strongly the use of forceps, great care being required.

D. B. Bobb read a paper entitled **The Case of a Lying-In Woman**. Many a woman dates the loss of her health to the loss of a certain confinement. The author believes in the dorsal position for 3 or 4 hours as a precaution against hemorrhage. A child 3 or 4 hours after labor is not uncommon and is generally of nervous origin. The usual aseptic precaution should always be followed. The patient should be told to pass urine every 7 or 8 hours in the

The typical case begins with marked chill and fever; a dull pain (and heaviness in the chest, accelerated respirations, cough with bloody or iron-rust sputum. Quite frequently the pleura is involved, when the pain is sharp and lancing with each respiration. The pulse is generally full and strong, and not greatly increased in frequency. Percussion in-

dicates dullness over the affected part, and an auscultation shows moist rales.

In double pneumonia the skin is of a bluish or livid hue. The right lung is affected more frequently than the left. The prognosis is always that there is danger. It seems to vary in different countries, I suppose on account of climatic influences. In this country about 25 per cent of the cases terminate fatally. Death is almost invariably caused by the failure of the heart to perform its functions. Of course double pneumonia, fully developed, is nearly always fatal.

In regard to the treatment, I have either been particularly lucky in getting cases predestined to recover, or else my plan of treatment which I have used for fifteen years, is good, and I will give it for what it may be worth. First, however, I will say that I have omitted mention of the various kind of germs supposed to cause pneumonia. When that field is more thoroughly cultivated, and a specific serum is discovered to destroy each kind, it will be necessary, in order to treat pneumonia scientifically, to ascertain the germ, whether it be pneumococcus, streptococcus, staphylococcus, or what bacillus, and then prescribe the serum antagonistic to that particular germ.

First of all I think it essential to have good air and ventilation. The air should be dry and pure, and kept at a temperature of from 65 to 70 degrees. Nothing can be worse for a pneumonia patient than to make him breathe an atmosphere damp, heavy and loaded with impurities, sometimes at a temperature of thirty degrees, and at other times 100 degrees.

To illustrate, I will relate a case that occurred a few years ago at Rock Island Arsenal, and I will pass around a chart copied from the official record.

The barracks at the Arsenal have quarters on the south for six married men, two on each floor. There is a door in the center of the south end, leading to a hall. These quarters are on each side of the hall, east and west. The building is a fine stone one, and heated by steam direct. There are two good sized rooms to each quarters, the front one (south) being the kitchen; the back room, the bed room.

This patient was in the west quarters on the first floor. The air in those bed rooms is always steamy, owing to the fact that cooking, washing, etc., is done in the other room, and heavy stone walls cause rooms to be damp, when heated by steam, anyhow.

I have no record of the first three days of this man's sickness, but the first day his temperature was about 102 degrees, the next day about 103 degrees, and the third day 104 degrees, taken each day about 11 a. m. There was six inches of snow on the ground and the outside temperature was about zero. I went to the commanding officer and told him that the sergeant was very sick and I was afraid he would die; that I was sure he would die if left where he was, and that I must remove him to the hospital. The colonel said: "Can you remove him to the hospital in such weather as this?" and I said it was his only chance. The colonel called Lieutenant

Thompson, told him to go with me, and to render any assistance that I might require.

We had no ambulance, and the best rig we had was an open spring wagon. We wrapped the patient up in the bed he was in, mattress and all, threw a couple of extra comforts over him, and fastened them all around him. We then threw another over him loosely, head and all, and had a man stay by his head with his arm under this last cover, and hold the cover about a foot off his face. This gave him about a cubic foot of air space under the cover, and of course a little fresh air would get in around the man's arm. In that way we took him to the hospital. When we got him in the hospital the patient said he would not have known he had been out of doors.

You all know what the Arsenal hospital is. I had blankets hung around on three sides of his bed, and one laid on the floor to keep off the drafts. In that way he got plenty of dry, fresh air, kept sufficiently warm by a big common stove. The chart tells the rest of the history. The man made a good recovery and is living yet.

Pneumonia is usually preceded by what is called "a bad cold on the lungs." The person continues his business, but does not feel good. In the course of a few days he has a chill. That is really the congestive stage, or stage of invasion. If the patient is seen during the chill we can not only check the extension of the disease, but we can decrease it somewhat. When seen during the chill I immediately give a hypodermic injection of 1-12 grain of heroin, or $\frac{1}{4}$ grain of morphia. Heroin is supposed to be particularly beneficial in disease of the lungs, and of late years I have used it almost exclusively, but I cannot say that I have observed any difference in the action of the two medicines. The hypodermic relieves the shock, stops the chill; not only stops further congestion, but relieves it somewhat, and gives comfort. In short, to use a legal phrase, it produces a stay in proceedings, and allows nature a chance to rally.

I then prescribe from five to six grains of calomel, and from twenty to twenty-four grains of quinine, put into eight capsules, and give one every hour, then nothing for five or six hours. If the calomel works off by the bowels, I do not give a physic. If not, I give either a saline or castor oil and turpentine. If I find the bowels much distended with gas, I give the latter anyhow. I believe the calomel acts as a general antiseptic and stimulates the secretions. The quinine lowers the temperature, and is antagonistic to congestion.

I then put the patient upon tincture of iron, and keep him upon it to the end; sometimes with chlorate of potassium added. A favorite prescription of mine is: Tincture of iron, one-half ounce; chlorate of potassium, one dram; syrup and glycerine, of each two ounces; water a sufficient quantity to make six ounces. Direct.: A teaspoonful in a wine-glassful of water every two hours. If there be nausea, I substitute creosote, but I have never depended upon the creosote treatment, I suppose, because I have been so well satisfied with the tincture

of iron treatment that I did not care to experiment. In cases attended with tympanitis or typhoid symptoms, I frequently use turpentine. I repeat the hypodermic injections often enough to keep the patient reasonably comfortable, generally two or three a day for the first three or four days. The theory upon which this treatment is based is this: I formerly treated the fever with aconite, veratrum-viride, and such medicines. Fortunately it was before the days of Antipyrin, Acetanellid, Phenacetine, and such coal tar preparations. Many of my patients died from a weak heart. It put me to thinking. We have a septicaemia or toxæmia, if that term is preferred. The patients don't die of fever, they die of debility. Then why not fight against that debility right from the start.

I was attending a case at the time I conceived that idea, and the patient was nearly dead, but he rallied under iron, whisky and good feeding, and made a good recovery. That was about fifteen years ago, and I have not lost a patient from pneumonia since, except one case of double pneumonia immediately following typhoid fever, where I was the consulting physician, but was called as soon as the attending physician made his first visit, and saw what he had. Therefore, I am equally responsible.

At a later stage, if the patient is very weak, I use whisky and freely, and by the way, I would suggest that you use good whisky.

A few years ago I attended a case in Moline. Dr. Dunn had preceded me in the case, but had to quit on account of sickness in his family. The patient was an old man, and nearly dead. I suggested whisky. He said he had tried it, but threw it up as fast as he took it. I asked if they knew anything about the quality. They said they got it at a liquor store and supposed it was good. His son was present, who remarked, "I can get good whisky. I am a member of the Piute Club of Davenport, and they have good whisky over there." He got it, and instead of the patient throwing it up, it settled his stomach, and for a few days he took at the rate of two quarts in three days. He soon took nourishment and made a good recovery. He is living yet, and is over eighty years old. I have managed to keep some of that brand of whisky in Rock Island ever since.

Locally, I generally begin with poultices, or some of the so-called muds now on the market. Sometimes with wet packs, but if the fever continues to rise, and especially if the patient is young and vigorous, I change to ice. I think the warm applications are generally more agreeable to the patient, and that is my reason for trying them first.

I admit the fact that I may have had a run of good luck, but it is, I think, now almost universally believed that pneumonia is a toxic poison, tending to death by heart-failure, so-called, and if that is true, why should not the most supporting treatment be the best, and why should not all remedies tending to weaken the heart be severely condemned.

Fayette County Medical Society.

Regular meetings are held in Vandalia the second Wednesday of January, April, July and October. Membership 20.

Officers.

President Moses Haynes, Bingham
Secretary A. L. T. Williams, Vandalia
Treasurer H. D. Smith, Vandalia

The Fayette County Medical Society met in the court room, Vandalia, Ill., October 14th, and was called to order by the President. A letter from the President of the State Society, asking the President of our Society to nominate a member to act upon the Auxiliary Committee on Medical Legislation of the American Medical Association was referred to the Society for action. A. L. T. Williams was nominated. F. M. Entreklin, the Treasurer, having removed from the county, H. D. Smith was unanimously elected to fill the vacancy. H. L. Rogers, of St. Elmo, was elected to membership.

A paper on **The Physician as a Business Man**, by J. H. Miller, of Pana, was read by permission. The paper was an excellent one and elicited a general discussion by most of the members and visitors present.

T. Buckmaster, of Altamont, made some timely remarks on **Gall Bladder diseases**, especially insisting on the importance of making a differential diagnosis between gall bladder diseases and acute indigestion.

H. D. Smith presented a case of **Synovitis of Knee Joint**. The case was later operated on before the Society by C. U. Collins, of Peoria.

Willard Bartlett, of St. Louis, read a paper on **Cases Illustrating the Course and Treatment of the Fecal Fistulae which Complicate Appendicitis**. The author emphasized the truth of Muehsam's statement that the fecal fistulae, which result from disease of an unremoved appendix, persist until the small offender comes out sooner or later, and cited two cases in illustration. Case 1 was a white man aged 41 years. He had previously been operated on for appendicitis, it having been impossible to discover and remove the appendix. A large amount of pus had been formed and a gangrenous portion of the small intestine required an astamosis with the Murphy button. Unfortunately the button had sloughed out thirty-six hours later, leaving a large fecal fistula which showed no disposition to close and caused the patient such distress and disgust that he welcomed a secondary operation. Some ten inches of small bowel was resected to insure healthy tissue for the sutures, and an end-to-end anastamosis with the Connell suture was made. The bowels moved next day, every stitch held, and the man was discharged from the hospital one month later perfectly well. He remained well for three months, when he contracted typhoid fever and died. At the autopsy the result of the anastamosis was perfect. The line of suture was hardly discernable, the intestine was not constricted, and but very little different from other portions shown. This, so far as the author knows, is the first time we

have the ultimate result of the Connell suture demonstrated upon the human subject.

Case 2. A traveling man of good habits, 24 years old, had been operated on three times for appendicitis, each time pus liberated and the wound drained. When the author first saw the case there existed a fecal fistula. There was considerable soiling, especially when the feces were thin and rectal enemata promptly appeared in the wound. Four months of rest and diet failed to close the fistula, and the patient welcomed another operation. Two fistulas were discovered, one in the cecum and one in the ileum, with a common opening on the skin. The appendix was discovered and removed. Portions of the cecum and ileum were resected and the ends united by a circular interrupted suture, the method of Connell being followed. In thirty days the patient left the hospital a well man. The author thinks from a consideration of this case that if the appendix has not sloughed off before we open and drain, and we fail to remove it at the primary operation, that we may expect a return of the appendicitis. He declared himself in favor of removal of the appendix at the primary operation, if it can be done without adding to the danger of the operation.

The author classified the fistulae which are caused by appendicitis first of all into those which occur in unoperated cases (not treated of in his paper), and those which follow an operation. He gives the following causes for the latter.

1. Improper suture of the stumps of the appendix.
2. Injury to the intestine at time of operation or later by the presence of drains.
3. Continued suppuration from a cavity walled off by intestine.
4. Disease of the bowel wall (tuberculosis of the peritoneum for example).
5. The intestinal manufacture of a fecal fistula for the purpose of speedily draining a distended and parietic small bowel.

Examples of this accident resulting from the first and second causes, the author considered too common to cite examples. He cited a case illustrating the fourth cause, which proved at the autopsy to be a case of tuberculosis of the peritoneum.

In illustration of the fifth cause, a case was cited in which a fecal fistula was manufactured to empty a parietic small bowel. By the expiration of three hours a gallon of fluid feces had escaped from the fistula and been conducted through a rubber tube onto the floor. Abdominal pain was gone and the patient could breathe as deeply as ever.

The author states that surgical treatment of a fistula is to be undertaken only in case the same fails to close of its own accord or in case the patient cannot stand a drain from the canal high up.

He concluded his paper with the following consideration of the operative methods:

1. Simple suture.
2. Lateral anastomosis.
3. Total exclusion.
4. Resection and anastomosis.

Suture alone is inadequate in many in-

stances, because we must either work in a tissue so friable that the stitches will not hold, or else narrow the lumen of the bowel so greatly that its function is seriously impaired. Lateral anastomosis, while an easy method, is often not successful for the reason that only a portion of the fecal stream diverted while the remainder continues in the old channel and escapes upon the skin. Total exclusion necessitates the persistence of a mucous fistula which is far from desirable, while not nearly so objectional as a fecal fistula. Speaking in general, resection is the ideal method. Since the introduction of the Connell suture this can be quickly accomplished, made water tight in every instance, and as these patients are free from the symptoms of acute illness, there is no reason why the operation should be more dangerous than any other major surgical procedure in experienced hands.

Asa L. T. Williams,
Official Reporter.

* Winnebago County Medical Society. *

Regular meetings are held in Rockford on the third Thursday of each month. Membership 50.

Officers.

President T. N. Miller, Rockford
Secretary C. S. Winn, Rockford
Member Com. on Legislation...D. Lichty, Rockford

The Winnebago County Medical Society devoted its entire October meeting to a clinic given by Dr. John Ridlon, of Chicago, professor of orthopedic surgery in the Medical School of the North Western University. Many interesting cases were disposed of by Dr. Ridlon. Several operations were performed.

In the evening a dinner was served at the First Presbyterian church by the ladies of that church, the guest of honor being Dr. Ridlon and the members of the Medical Society honoring him. At the close of the dinner, Dr. Ridlon addressed the gathering on his work, making plain much that he has gathered from his experience in this line extending over many years.

A distressing accident occurred in the afternoon of Wednesday, October 7th, while Dr. T. N. Miller and some friends were enjoying a nutting expedition in the country near Rockford. Dr. Miller had climbed a tree for the purpose of shaking down the nuts, and was about twelve feet above the ground when he had an attack of dizziness and fell. He struck the turf squarely on his back, and the shock rendered him unconscious for the moment. He recovered shortly, and with the assistance of his friends attempted to rise, but was unable to do so. He was taken to a nearby farm house and word sent to Dr. George Winn, who took an ambulance out and brought the injured man to his home in the West End, where he has been confined to his bed since.

Dr. Miller is one of the best known practitioners in the city and prominent in medical circles. At Present he is the president of the Winnebago County Medical Society. The announcement of his great misfortune will cause

great surprise and regret among his many friends.

The Winnebago County Medical Society held its regular monthly meeting November 19, 1903. The Society gave to its members and a few invited physicians another clinic similar to the one of last month, Weller Van Hook, of Chicago, being the clinician. The clinic was surgical and was held at the Memorial Hall. Four cases were operated upon. The first was a case of special interest, being a **large multilocular cyst of the ovary** in a girl 15 years of age. The cyst contained about two gallons of fluid. The second case was a **prostatectomy and lithotomy**. The third case was an exceedingly interesting case. It was a **rupture of the urethra due to a fracture of the pubic bone**. Following the fracture an abscess formed at the sight of the fracture, which was opened and drained. Upon the removal of the drainage tube the urine began to pass through the fistulous opening and through the urethra in about equal amounts, a catheter having been previously passed into the bladder and out through the distal part of the urethra. The doctor dissected up the ends of the urethra and made an anastomosis, which required all of his skill in urethral anastomosis. The last case was one of **re-drainage of an old pleural cavity for empyema**. Dr. Van Hook's manner of continuous drainage will be used in this case.

In the evening the Society met at the Nelson House ordinary and held its regular monthly meeting. Three new members were elected, R. Broughton, W. Grant Hatch and Chas. G. Ives being duly elected as members of the Society. Daniel Lichty was elected as a member of the Auxiliary Committee on Medical Legislation of the American Medical Association. After the routine business the regular hour for program was given to Dr. Van Hook, who spoke on the subject of **Surgical Diagnosis**. He spoke in particular in regard to the diagnosis of abdominal tumors, chronic appendicitis, chronic inflammations of the gall bladder and chronic intestinal obstruction.

The subject was opened for discussion. Dr. Allaben reported a case of intestinal obstruction which came to autopsy, giving a brief description of the findings. This brought up the manner of treating such cases by anastomosis by exclusion. Several questions were brought up and answered by Dr. Van Hook.

The afternoon and evening proved to be exceedingly profitable to our Society, and I believe that the getting together of the physicians of the County at these clinics will tend to create a more fraternal feeling and promote a greater desire for post-graduate work.

Chas. S. Winn, Official Reporter.

Wabash County Medical Society.

Regular meetings are held at Mt. Carmel on the last Tuesday of January, April, July and October. Membership 16.

Officers.

Secretary J. B. Maxwell, Mt. Carmel

The Wabash County Medical Society gave

a banquet in honor of Dr. Jacob Schneck at the Fifth Avenue Hotel, Mt. Carmel, October 27. Those present were: Dr. J. Schneck and wife; Dr. S. W. Schneck and wife; Dr. C. E. Gilliatt and wife; Dr. R. J. McMurray and wife; Dr. J. E. Smith and wife; Dr. P. G. Manley and wife; Dr. Reid and wife; Dr. F. S. Gray and wife; Dr. J. C. Utter and wife; Dr. J. B. Maxwell and wife; Dr. G. C. Kingsbury and wife; Dr. L. J. Lescher and daughter, Miss Leah; Dr. W. B. Moon.

The program of the day consisted of a **Report on Foreign Clinics**, by Dr. J. Schneck, who has just returned from a four months' trip in Europe. This was exceedingly interesting.

The Relation of County to the State and National Associations, by Dr. G. C. Kingsbury, was an effort to get all our physicians interested to the organization plan adopted last April.

In behalf of the Society, Dr. Moon very gracefully made the presentation speech.

Dr. Schneck, in response, expressed his great appreciation of the honor conferred upon him by his medical conferees.

Mrs. S. W. Schneck recited a piece from Emerson Brooks, **The Race for a Bride**.

Dr. Maxwell spoke of **The Burdens of a Physician**, and Dr. McMurray of the **Humorous Life of the Physician**.

Dr. J. Schneck gave a report of his journey home, with some very happy experiences.

There was a large attendance and much interest manifested.

McLean County Medical Society.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President F. C. Vandervoort, Bloomington
Secretary A. F. Kaeser, Bloomington

The McLean County Medical Society met at the City Hall, Bloomington, November 5, with the President, Dr. F. C. Vandervoort, in the chair.

Dr. C. M. Noble reported for the Executive Committee, progress in regard to the place of meeting for the Illinois State Medical Society.

Dr. Fox reported for the Committee on Law, progress made in investigating the writing of prescriptions by unlicensed practitioners.

The smallpox situation of the city was discussed. Aseptic technique of vaccination was given. It was the opinion of most present that the mere fact that the vaccination did not "take" on the third attempt, was no sign of immunity of the patient. A case was reported where vaccination failed twelve times, but was successful on the thirteenth attempt.

Dr. R. A. Noble, the essayist of the evening, read a paper on **Puerperal Eclampsia**. In part he spoke as follows:

The patient should realize that pregnancy is an illness of nine months' duration, and thus lessen the liability to the above disease.

Cause: It was formerly thought to be due to uremia. Next the idea prevailed that it was an irritation of the central nervous system. The more modern idea is that it is due to an

autointoxication. In some cases this has its origin in a functional disorder of the thyroid gland. In others it is due to the toxins of faulty metabolism. The disease has a distinct pathological process. The heart is engorged, thrombosis occur in many vital organs, and from this develop necrotic areas, especially in the liver and kidneys.

Symptoms: These are due to the inactivity of the organs of secretion and excretion. If in pregnancy, and patient presents herself with a coated tongue, headache, albuminuria and amount of urea diminished, then be on guard for this disease. If the urea is less than 1 per cent, then we must inaugurate energetic eliminative treatment. The inauguration of the eclamptic seizure simulates an epileptic attack.

Prognosis: In general the earlier the attack in pregnancy the more serious will it prove to be. Small amounts of albumin point to a favorable outcome.

Treatment: Prophylaxis. Make repeated examinations of the urine, especially look for total amounts of solids; should have at least 300 grains per day. In those cases where the thyroid gland failed to be hypertrophied by the sixth month, give the dessicated thyroid extract.

Attack: Transfusion of normal saline solution at 108 degrees. Prompt removal of uterine contents certainly offers best hope of saving patient's life.
A. F. Kaeser.

 ◆ Southern Illinois Medical Society. ◆
 ◆
 ◆

 Regular annual meeting is held the first Thursday and Friday of November. Membership 200.

Officers.
 President M. D. Empson, Hartford
 First Vice President .. J. W. Armstrong, Centralia
 Second v. Pres J. L. Wiggins, East St. Louis
 Secretary E. E. Fyke, Centralia
 Treasurer A. T. Telford, Olney

The Southern Illinois Medical Association held its twenty-ninth annual meeting in Marion, Ill., Thursday and Friday, November 5 and 6, 1903, with Dr. J. A. Helm, of Metropolis, presiding. The sessions were held in the Christian church. The meeting was highly successful, both in point of attendance and scientific interest. About seventy-five physicians were in attendance, and twenty-seven new members were added to the list.

A resolution was passed, making the St. Louis Clinique the official organ of the Association. East St. Louis was selected as the next meeting place, and the above officers were elected:

The following program was presented:
Catarrhal Affections of the Upper Air-passages and How to Treat Them, G. C. Adams, East St. Louis.

History of Medicine, with Reference to Treatment, Based Upon Rational Thought, not Empiricism, J. W. Armstrong, Centralia.

Empyema, with Report of Cases, H. C. Mitchell, Carbondale.

Albuminuric Retinitis, James Moores Ball, St. Louis, Mo.

Summer Diarrhoea of Children, Geo. T. Weber, Olney.

Report of Case, Prof. G. H. French, Carbondale.

Pulmonary Tuberculosis, with Special Reference to Its Etiology, C. W. Lillie, East St. Louis.

Pernicious Malaria, Etiology, Diagnosis and Treatment, M. L. Winstead, Wetaug.

Non-penetrating Wounds of Abdomen, with Report of Cases, J. L. Wiggins, East St. Louis.

Some Difficulties in the Diagnosis of Abdominal Lesions, with Illustrative Cases, Carl E. Black, Jacksonville.

When Shall We Drain the Abdominal Cavity, with Report of Case, W. S. Wiatt, East St. Louis.

An Unique and Agonizing Gall Stone, W. F. Grinstead, Cairo.

Organization and Ethics of Physicians, D. D. Hartwell, Marion.

Treatment of Parenchymatous Nephritis, W. A. Sim, Jr., Golconda.

Errors of Refraction, A. C. Ragsdale, Metropolis.

 ◆ Peoria City Medical Society. ◆
 ◆
 ◆

 Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 70.

Officers.
 President L. A. McFadden
 First Vice President J. C. Roberts
 Second Vice President B. M. Stephenson
 Treasurer Jeanette Wallace
 Secretary S. M. Miller
 Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.

The Peoria City Medical Society met Tuesday evening, October 6, 1903, at the National Hotel, and was called to order by the President, Robt. A. Hanna.

Members present: Hanna, Will, Hensley, Jeannette Wallace, Thomas, W. T. Sloan, McIlvaine, Cercoran, E. L. Davis, Weber, Plummer, Waln, Allison, Mansfield, Sutton, Marcy, McFadden, Stephenson, Eckard, Collins and Brobst.

The Treasurer and Secretary handed in their reports for the year ending October 6, 1903, which were referred to an auditing committee.

The applications of E. L. Darling, of Manito, Ill., and Frank A. Stubblefield, of Peoria, were received and referred to the Board of Censors.

The committee on a permanent meeting place reported that the room in the Observatory Building had been secured, and it was agreed to occupy it at the next meeting.

O. B. Will reported the arrangements that had been made to entertain the Military Tract Medical Society.

In consideration of their age and ability, Dr. W. H. Conibear, of Morton, Ill., and Dr. D. W. Magee, of Peoria, were made honorary members of the Society.

O. B. Will read a paper on **The Influence of Organization on the Profession and the Individual**, which was discussed by Drs. Marcy and Allison.

Adjourned.

The Peoria City Medical Society met Oc-

tober 27, 1903, at its room in the Observatory Building, and was called to order by the President, Robt. A. Hanna. The meeting was for the election of officers which was accomplished as above.

C. U. Collins,
Official Reporter.

The Peoria City Medical Society met on Tuesday, November 17th, in the Observatory building, to hear a symposium on **Tuberculosis**. Dr. Kanne read a paper on the **Etiological Factors of Tuberculosis**.

Dr. Eckard, **The State Control of Tuberculosis**.

Only three States and four cities make the report of tuberculosis obligatory, five States and five cities make it optional. The United States government has two sanitariums, and five States have institutions devoted to the care of tubercular subjects. Tent Colonies exist only in Pennsylvania and in Massachusetts only three cities have municipal hospitals for consumptives. Eleven States contain forty-two private institutions. Twenty-States have done nothing to mitigate tuberculosis in man or beast.

The main source of the infection arises from the sputum of tubercular individuals. Our efforts, therefore, should be aimed at the prevention of the danger arising from this source. It is among the poorer classes living under unsanitary conditions, and in ignorance that the greatest danger lies, not only by direct contact, but through less obvious pathways—the factory and factory product, the sweat-shop, the street car, etc.

Obligatory Notification is the key to the control of the cases at home. On receipt of notice of tuberculosis in an individual, the sanitary officer should investigate his environment, and if those coming in contact with him are endangered, the steps necessary to minify the danger should be instituted.

Instruction as to the nature of the disease, the source of danger, the methods of prevention, and of disposal of the sputum, and instruction in the use of suitable disinfectants, should be given. Disinfection of rooms which have been used by tubercular subjects should be instituted on their removal or death, before occupation by others. Bed clothing, blankets, hangings, and all articles apt to retain infective material are to be likewise disinfected.

Education of the tubercular individual, his associates, and the public is the keynote of the situation. In New York under such a sanitary control, the mortality from tuberculosis has decreased 35 per cent.

The other means of controlling the spread, and of reducing the mortality, is the sanitarium treatment, and the maintenance of these will devolve upon the State, and municipal governments.

Dr. Roberts, **Tuberculin in the Treatment of Tuberculosis**.

The toxin should be used in doses short of that necessary to produce reaction, beginning with small doses, injected every other day, and gradually increasing the dose till the patient is immune to any dose, and manifests no reaction. The aqueous extract of tubercle bacilli of von

Ruck is used. The patient must be kept under close observation and control during the treatment which lasts about three months. Temperature observations and absolute rest after the injection are necessary. These conditions are hard to realize outside of hospitals, and therefore its use must be restricted greatly. Dr. Roberts believes that it is a valuable adjunct to the treatment of Tuberculosis, curative in many cases, and helpful in almost all stages.

Dr. Wallace reported four cases treated by the injection of the aqueous extract of tubercle bacilli, detailing the clinical findings. Two of these in the earlier stages, and two more advanced, with well marked pulmonary and systemic symptoms. Improvement followed the injections in three cases, with ultimate cure. One case was lost sight of. The direct improvement following the injection evidences the therapeutic value of the procedure.

Dr. Zeller. The great enthusiasm with which Tuberculin was received some years ago, was followed by rapid reaction after disappointing and even unfavorable results, for gangrene of the lung has followed, and the use of tuberculin fell into disrepute. I used it myself, and was hopeful that we had a specific, but the patients died as before.

Dr. Kanne. There is a general misunderstanding, and a loose use of terms. You do not distinguish between the tuberculin formerly used and long since discarded—Koch's tuberculin, and the aqueous extract of tubercle bacilli which was used in the cases reported. Tuberculin is a culture of tubercle bacillus, which is simply sterilized and so used, containing toxins, peptones, and salts. In the preparation of the aqueous extract of von Ruck, the tubercle bacilli are separated from the culture-media, washed to remove all toxins including the tuberculin and sterilized, and it is a watery extract of the tubercle bacilli themselves that is used.

Dr. Green showed two cases:

1. **Case of Anterior Poliomyelitis** of two years duration in a girl about eleven years old. This had been variously and loosely diagnosed as Tabes, and tuberculosis of the hip. Both legs were affected, the left worst, with characteristic talipes equino-varus and wasting.

2. A case in which a reduction of **Congenital Dislocation of Both Hips** had been accomplished six months previously by the Lorenz method. The child was 4 years old, and had not been able to walk. There is a good result on each side.

S. M. Miller, Secretary.

Mason County Medical Society.

Regular meetings held monthly in the various towns of the county. Membership 10.

Officers.

President P. L. Dieffenbacher, Havana
Vice President E. W. Paul, Forest City
Secretary H. H. Hanly, Havana
Treasurer Fred Grimmer, Topeka

Your letter received and contents fully noted. The Mason County Medical Society was organized on October 22, 1903. The Constitution

was adopted and officers elected on October 29, 1903.

The following were elected, P. L. Dieffenbacher, Havana, President; E. W. Paul, Forrest City, Vice President; H. H. Hanly, Havana, Secretary, and Fred Grimmer, Topeka, Treasurer.

The Society expects to hold meetings monthly at the different towns in the county. At present time there are only ten members, but it is expected that nearly all will join. The next meeting will be held early in December either at Havana or Mason City. At the last meeting the only things done were to adopt a Constitution and elect officers. I would be pleased to know what amount it is necessary to remit to State Society to pay dues up to the next regular meeting of State Society. The Constitution adopted is the one recommended by American Medical Association for county organizations.

Very respectfully,

H. H. Hanly.

Bureau County Medical Society.

Regular meetings held in Princeton the second Thursday of November and May.

Membership 40.

Officers.

President J. H. Franklin, Spring Valley
First Vice Pres. C. H. Kemp, Tiskilwa
Second Vice Pres. J. C. White, Seatonville
Sec'y and Treas. O. J. Flint, Princeton

The Society held its Twentieth semi-annual meeting at Princeton, November 12, 1903. In the absence of the President, W. E. Howard, of Ohio, C. H. Kemp, of Tiskilwa, presided.

The following officers were elected for the ensuing year: President, J. H. Franklin, Spring Valley; First Vice President, C. H. Kemp, Tiskilwa; Second Vice President, J. C. White, Seatonville; Secretary and Treasurer, O. J. Flint, Princeton.

Secretary and Treasurer's report showed a balance in the treasury of \$33.96.

Members present, twenty-three. Visitors, Drs. F. Kreissl, Denslow, Lewis, Edson B. Fowler, of Chicago; Edgar Cook, of Mendota; and W. O. Ensign, of Rutland.

Application for membership was made by the following: Grant B. Bushee, Buda; Joseph Marca, Spring Valley; Walter B. Schwuchow, Princeton; Walter S. Bebb, Wyand; L. G. Mayhall, Walnut; William Ratch, Whitefield; and W. C. Griswold, Princeton. All were duly elected members. Drs. Lewis, Kreissl and Fowler, of Chicago, were made honorary members.

Dr. Kreissl read a paper on **Cystitis**; Edson B. Fowler one on **Diagnosis and Treatment of Acute Pleurisy**; Denslow Lewis spoke of **Modern Caesarian Section**; and Dr. Otis on **Non-Medical Medical Treatment**; all of which were unusually interesting and instructive.

After the noon recess the meeting adjourned to the hospital, where Dr. Kreissl gave an interesting and instructive clinic, in which he demonstrated the practical technique of cystoscopy.

The meeting re-convened at the City Hall, where Dr. Ensign addressed the Society on the

value of organization, and what was hoped to be accomplished in the future by the united efforts of its members.

Changes were made in the Constitution to conform with the Constitution of the Illinois State Medical Society.

The meeting adjourned, to meet next May.

O. J. Flint,

Official Reporter.

Vermilion County Medical Society.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8.30 p. m. Membership 40.

Officers.

President Jos. Fairhall, Danville
Vice President F. N. Cloyd, Westville
Sec'y and Treas. E. E. Clark, Danville
Board of Censors: H. F. Becker, E. A. Johnston, W. A. Cochran.

Committee on Violations of the Medical Practice Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

The Vermilion County Medical Society met November 9th, in the City Hall, called to order by the President, H. F. Becker, at 8:30 p. m.

Annual meeting and election of officers.

Minutes of the October meeting read and adopted.

Report from Board of Censors being favorable, the following were elected to membership: Effie Current, G. M. French and Geo. L. Williamson, of Danville; G. W. Hughes, of Armstrong; P. H. Fithian, of Fithian; O. W. Michael, of Muncie, and A. C. Johnson, of Sidell.

The paper of the evening was on **Blood Examinations**, by S. L. Landauer, and was a very interesting essay. Discussion opened by W. A. Cochran, closed by the essayist.

The Treasurer's report for the year was read and accepted.

A motion was made and carried that the dues are payable at the annual meeting, and if not paid by thirty days before the meeting of the State Society, such person be dropped for non-payment of dues.

Election of officers resulted as above.

Adjourned.

E. E. Clark,

Official Reporter.

Sangamon County Medical Society.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m. Membership 73.

Officers.

President B. B. Griffith, Springfield
Vice President S. E. Munson, Springfield
Secretary-Treasurer C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The Sangamon County Medical Society held its third annual banquet and election of officers Monday evening, November 9th, at the Leland Hotel; A. L. Brittin President and toastmaster. Forty members attended the meeting, and thirty-two sat down to the banquet.

B. B. Griffith was elected President. S. E. Munson was elected Vice President. C. P. Colby was elected Secretary-Treasurer. W.

O. Langdon, C. R. Spicer and R. D. Berry were elected as the Board of Directors.

The applications of J. V. White, of Auburn, and N. B. Gardner, of Loami, were read the second time, after which they were duly elected to membership.

A vote of thanks was extended to the retiring President and Secretary. The Secretary was allowed one dollar for each meeting held during the last year. The following bills were allowed and ordered paid:

Dues to State Society, thirteen at \$1.50..	\$19 50
Phillips Bros., Printing.....	1 50
Leland Hotel	32 00
Percy Taylor, for eleven meetings.....	11 00
Secretary, for Stamps.....	1 00

Total \$65 00

The report of the Secretary-Treasurer was read, ordered placed on file and O. K'd by the Board of Directors. The total receipts were \$232.77, total expenditures \$227.70, leaving a balance of \$5.07.

After the members had paid due regard to the menu, the following toasts were listened to with pleasure:

Medical Ethics, L. C. Taylor.

Past, Present and Future, H. B. Buck.

What is Expected of the Physician, B. B. Griffith.

Precision in Medicine, S. R. Hopkins.

Practice of Medicine in Germany, G. N. Kreider.

Adjourned.

Percy Louis Taylor,
Official Reporter.

Champaign County Medical Society.

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President J. F. Purcell, Champaign
Secretary Jas. S. Mason, Rantoul

The Champaign County Medical Society met in regular session, October 15, at Hotel Beardsley, Champaign.

The following members were present: Johnson, Mandeville, Martin, Dodds, Dillon, Miner, Wm. Reece, Omar Reese, Newcomb, Burres, Renfrew, Purcell, J. E. White, Powers, Lyon, Brayshaw, Mills, Rachel Cooper, and Mason.

The following were elected to membership: Dr. Brayshaw, of Homer, Ill.; Dr. Jennie Lyon, of Champaign; Dr. Munsell, of Urbana; Dr. Foelsch, of Bondville, Ill., and Dr. Kariher, of Champaign.

A symposium on Mercury made up the program, as follows:

(a) Mercury as a cholagogue—J. D. Mandeville.

(b) Mercury externally—S. W. Shurtz.

(c) Abuse of Mercurials—C. B. Johnson.

(d) Mercury as an alterative—W. F. Burres.

(e) Mercury in Children's diseases—J. F. Purcell.

Ten minutes discussions.

This program was a departure from our usual make-up of programs, but the meeting

proved it a helpful innovation. We commend it to our neighbors. Resolutions of respect and sympathy on the death of Dr. D. R. McKinney, a life member of the Society, were adopted by the Society, and copies of same were ordered sent to the immediate members of his family.

Dr. Purcell, President of the Society, presided.
Jas. S. Mason, Secretary.

East St. Louis Medical Society.

Regular meetings are held every two weeks. Membership 30.

Officers.

President C. F. Whitmer, E. St. Louis
Secretary C. W. Lillie, E. St. Louis
Treasurer W. H. McLean

The Society met in regular session on November 2, 1903, with President C. F. Whitmer in the chair and C. W. Lillie, Secretary, and members, Adams, Hagarty, Hanson, Housh, Sasvil and Collins, present; also L. J. Smith, a visitor.

Minutes of last meeting read and approved. Dr. Savil reported a case which was supposed to be colic by the friends of the patient, but which was really a *pyosalpinx of gonorrheal origin*, a fact he did not feel at liberty to reveal, and hence he was censured by the friends for not giving prompt relief. There was tenderness over both ovaries; cramping of the legs and coldness of the feet; at times there was intense pain over the abdomen and delirium. The doctor would ask if delirium is common in these cases? There was also some cramping in the arms.

Dr. Hanson replied to the query that he found delirium common in pus cases.

Dr. Hanson reported a case of a young woman who is suffering from a severe form of *ulcerative sore mouth*. Her history shows that she was married a year and a half ago, and seven months ago was delivered of twins, both of which are alive and healthy. The ulcers first appeared three months ago, when the children were four months of age. The ulcers were deep, and came in successive crops. There was no syphilitic history, and no enlarged glands, though the ulcers have a syphilitic appearance. Mercury was given, but no improvement followed. Several bad teeth were removed on the supposition that they might be the cause of the ulcers, but still no change. All the usual remedies were applied, without effect. There had been some superficial anal fissures, but these had been readily cured. The patient had oral ulcers before marriage, but these had usually healed in two or three days.

Dr. Adams read a paper on *Diseases of the Upper Air Passages and How to Treat Them*.

The paper was discussed by Lillie and Whitmer.

L. J. Smith was proposed for membership, and referred to the Board of Censors.

Adjourned.

C. W. Lillie,
Official Reporter.

The Society met in regular session on Monday evening, November 16, 1903, President C.

F. Whitmer in the chair and Secretary C. W. Lillie and members, Wiggins, Thompson, W. E. Wiatt, Collins, Cannady, Campbell and Voris, present.

Minutes of the last meeting were read and approved.

Board of Censors reported on Drs. A. B. McQuillan and L. J. Smith, and they were elected by acclamation.

J. L. Wiggins offered a resolution, which would be in the nature of an amendment to the Constitution and would admit homeopaths and eclectics to membership in the Society, but withdrew it in order to present it in proper form at the next meeting.

Discussed by Lillie, Campbell, Thompson, Wiatt, Whitmer.

Paper by Dr. Collins on Malaria.

Discussed by Drs. Wiggins, Wiatt, Campbell, Lillie, Whitmer.

 Kendall County Medical Society.

Regular meetings are held in Yorkville on the first Tuesday of May and October. Membership 15.

Officers.

President Wm. M. Hanna, Lisbon
 Vice President F. R. Frazier, Yorkville
 Secretary-Treasurer ... R. A. McClelland, Yorkville
 Board of Censors: W. E. Kinnett, Yorkville; A. C. Johnson, Newark; S. A. Camborn, Lisbon.

The Kendall County Medical Society held its annual meeting Tuesday evening, October 13th, in the parlors of the Hotel Nading, in Yorkville, Dr. W. M. Hanna, of Lisbon, in the chair. On roll call the following members were present: Drs. Kinnett, Frazier, Camborn and Johnson. Minutes of last meeting were read and approved. Reports of Secretary and Treasurer were read and approved. Applications for membership of Drs. W. E. Kittler, of Oswego, Ill., and Harry E. Freeman, of Millington, was read and referred to the Board of Censor. A motion by Dr. Frazier was presented, to amend the constitution, changing the number which shall constitute a quorum from five to three members. Motion layed over until next meeting. Motion by Dr. Kinnett that a committee of three be appointed to recommend a revision of fee bill; carried. Drs. Kinnett, Frazier and Camborn were appointed. Report of Board of Censor on petition of Drs. Kittler and Freeman, recommended acceptance of same, on which a vote was taken and the gentleman duly elected.

Election of officers being the next order of business, motion by Dr. Kinnett that Dr. Frazier cast the ballot for Dr. Wm. M. Hanna for President; carried. Dr. Frazier casts ballot, and Dr. Hanna is duly elected President of this Society for the ensuing year. Motion by Dr. Johnson that Dr. Kinnett cast the ballot for Dr. Frazier for Vice President; carried. Dr. Kinnett casts ballot for Dr. Frazier, who is duly elected. Motion by Dr. Kinnett that Dr. Johnson cast ballot for Dr. McClelland for Secretary-Treasurer; carried. Dr. Johnson casts ballot. Dr. McClelland is duly elected. President appoints as Board of Censors, Drs. Kinnett, Johnson and Camborn. The President an-

nounces with great pleasure the introduction of Prof. D. N. Eisendrath, of Chicago, who will address the members (after the banquet, which is in waiting) on the subject of **Fracture and Treatment**. The members and their wives formed in procession and entered the banquet hall, where the committee had spread for the Society a most elegant repast.

After spending an hour in supplying the inner man, the ladies were extended an invitation to join in listening to the paper by Dr. Eisendrath. This Society extended to Dr. Eisendrath a vote of thanks for the most excellent address, which was instructive and entertaining, and enjoyed by all, and Dr. Eisendrath was extended an invitation to again meet with the Society at some future time and address them. The best of feeling prevailed and the ladies entered into the social features, which helped to make this meeting a very pleasant one.

Our Society, is not large in numbers as yet, but we are adding new members, and still hope to have unite with us every physician of the county.

State Society dues received from Drs. Johnson, Kinnett, Camborn and Kittler.

Meeting adjourned, to meet first in May.

 DeWitt County Medical Society.

Regular meetings are held in Clinton on the second Tuesday of January, April, July and October. Membership 25.

Officers.

President J. C. Myers, Clinton
 Secretary J. H. Tyler, Clinton

The DeWitt County Medical Society convened in the County Court room, October 13, 1903, at 1 o'clock p. m., President J. C. Myers in the chair.

The minutes of the last meeting were read, and after correction were approved. Will T. Dowdall's application for membership was presented. On motion, it was referred to the Censors, and they being absent, it was referred to Drs. Wilcox, D. W. Edmiston and McMackin, who reported favorably. After signing the constitution and paying the initiatory fee of \$1.50, he was declared a member of said Society.

Dr. McMackin reported a case of purpura hemorrhagica, in the lower extremities in a boy four years old, complicated with rheumatism, which yielded to the Salicylates in about two weeks.

Dr. Wilcox reported a peculiar case of typhoid fever. At the expiration of fourteen days the fever subsided and temperature became normal, and every indication of a speedy recovery was indicated. Without any apparent cause, hemorrhage occurred, which he supposed was due to some mechanical cause. After ten days the patient recovered and is now well.

On motion, the Society adjourned, to meet on the second Tuesday in January, 1904.

Regular meetings are held the fourth Thursday of
January, April, July and October.
Membership 75.

President	R. M. Sargent, Lincoln
Secretary	H. S. Oyler, Lincoln

A. G. Servoss, of Havana, presented the Society with a paper on **Osteomyelitis**, giving the etiology pathology symptoms, diagnosis and treatment. Reported a case in which the whole shaft of the Humerus was involved, in which an incision was made and "all the dead bone and marrow were removed, the edge of the bone sinuses were freshened, and the whole of the bone cavity thus made was sterilized with carbolic acid, which was quickly neutralized with alcohol. * * * Thorough irrigation was then

President C. F. Voyles, Murdock
Secretary Walter C. Blaine, Tuscola

The subject of a uniform county fee bill was then taken up. The bill, which was pre-

against whom charges were preferred at the former meeting, was expelled from the Society. The constitution was changed so as to conform with that of the State Society.

The following program was rendered during the afternoon: **Fractures of the Femur**, H. F. Ballard, Chenoa; **An Unusual Laryngo-Pharyngeal Tumor**, H. G. Ohls, Odell; **Treatment of Accidents**, O. A. Coss, Saunemin; **The Half Normal Salt Solution in Toxic and Anaemic Conditions**, M. M. Otis, Fairbury; **The Obstetrical Hand as a Substitute for Forceps, with a Report of Cases**, E. J. Carroll, Graymont; **Address in Surgery**, O. B. Will, Peoria.

The above program was well discussed by the Society, assisted ably by Dr. Will, of Peoria, and Dr. Howard Crutcher, of Chicago.

At six o'clock the Society were the guests of Dr. and Mrs. Ross, at a dinner, given at their residence. The after dinner toasts were as follows: **The Physician in Literature**, C. L. Hamilton, Dwight; **Reminiscences**, J. J. Stites, Pontiac; **Medical Organization**, O. B. Will, Peoria; **Across the Pond**, J. D. Scouller, Pontiac; **Peter's Wife's Mother**, J. J. Pearson, Pontiac; **It Might Have Been**, John Ross, Pontiac.

This Society has only been organized two and a half years, its membership is made up of men from every section of the county, few active men in the county are yet outside of the organization, about two-thirds of our membership attend every meeting, and programs are always presented that are hard to beat.

 *
 * **Crawford County Medical Society.** *
 *

 Regular meetings are held the second Thursday in each month. Membership 24.
Officers.

President J. W. Kirk, Oblong
 Vice President C. E. Price, Eaton
 Secretary H. N. Rafferty, Robinson
 Treasurer C. H. Voorheis, Hutsonville
 Board of Censors: W. H. Hoskins, Trimble; G. W. Fuller, Palestine.

The Society met in regular session in Robinson on November 12, 1903, at the office of T. N. & H. N. Rafferty. The following members were present: Drs. Cato, Barlow, Dunham, Gordon, Hayhurst, Kirk, Meserve, Mitchell, Price, T. N. Rafferty and H. N. Rafferty.

After approval of the minutes of the previous meeting, Elmer Midgett, of Flat Rock, was elected to membership.

The first paper of the day was that of J. B. Cato, on **Gonorrhoeal Prostatitis**. This was a very elaborate production, practically covering the whole field of this very troublesome condition. In the discussion which followed, the point was made that while the Genito-Urinary diseases were encountered so commonly in general practice, yet the whole subject was often overlooked in preparing programs for our Society meetings.

C. E. Price read a paper on **The Differential Diagnosis of Cholelithiasis, Appendicitis and Ruptured Tubal Pregnancy**. This effort of the doctor's was well received and showed clearly the many points to be considered in the differentiation of these most confusing conditions.

J. M. Mitchell read a paper on **Lobar Pneumonia**. The author dealt with the subject in a masterly manner, from the initial chill to the crisis, and that it was well received by the Society was shown by the full discussion which followed.

In the matter of unfinished business, the motion to amend Article I. of our Constitution, which was made by Dr. Barlow at the last meeting, was taken up for action. After the original motion had been seconded, T. N. Rafferty offered an amendment to it, to make it read as follows: That Article I. of the Constitution be amended to read thus: "The title of this Society shall be The Crawford County, Illinois Medical Society, and its members shall be reputable and legally registered physicians, who do not claim to practice nor lend their support to any exclusive system of medicine." The amendment as amended was carried, with but one dissenting vote.

Another Constitutional amendment was offered by T. N. Rafferty, as follows: Moved that Article VII. be amended to read: "Section 1. Membership may consist of affiliating members, those who desire to be members of the Illinois State Medical Society, and non-affiliating or social members, those who do not desire to affiliate with the State Society. Section 2. The annual dues shall be \$2.50 for affiliating members, and \$1.00 for social members."

This motion was laid on the table for consideration at our next meeting.

At the suggestion of J. B. Cato, it was moved and seconded that the Chair appoint a committee of three to draft a new fee bill and report at the next regular meeting. Motion carried, and the President appointed J. B. Cato, Chairman C. E. Price and T. N. Rafferty.

On motion, the Society adjourned.

H. N. Rafferty,

Official Reporter.

 *
 * **Clinton County Medical Society.** *
 *

Regular meetings are held in Carlyle the first Wednesday of February, April, August and November. Membership 20.

Officers.

President W. P. Gordon, Carlyle
 Vice President Th. Gaffner, Trenton
 Secretary C. H. McMahan, Carlyle
 Treasurer Ph. H. Leibrock, New Memphis

The Clinton County Medical Society held its regular quarterly meeting in Carlyle, November 4th.

The matter of affiliating and becoming a component part of the Illinois State Medical Society was discussed, and a communication from the Secretary of the State Society was read, in which he stated that our application for a new charter would be acted upon January 1, 1904.

A committee was appointed to revise the by-laws of the former Clinton County Medical Society to conform with the requirements of the new organization, said committee to report at

a called meeting to be held in Carlyle, Wednesday, December 2d.

J. Q. Roane, of Boulder, made application for membership and was accepted by the Society.

C. H. McMahan,
Official Reporter

* Western Illinois District Medical Society. *

Regular meetings are held the last Friday of April and October. Membership 50.

Officers.

President F. P. Norbury, Jacksonville
Secretary H. A. Chapin, Whitehall

The semi-annual meeting of the Society was held in the Court House at Jerseyville, Friday, October 30, 1903.

Called to order at 10:30 a. m., by President Norbury. Present, Bransford Lewis, C. E. Burford, St. Louis; F. P. Norbury, E. H. Herriott, Jacksonville; G. W. Ross, Carrollton; W. T. Knox, Manchester; J. A. Flautt, J. E. Watson, Otterville; F. H. Russell, Eldred; J. R. Ash, Brighton; C. B. Foreman, E. W. Fenity, Kane; H. W. Chapman, H. A. Chapin, White Hall; A. K. Van Horn, H. R. Gledhill, E. L. H. Barry, J. S. Williams, A. A. Barnett, L. T. Waggoner, A. M. Cheney, A. S. Hunt, M. B. Titterington, Jerseyville. Waldo Fisher Censor, being absent, Dr. Knox was appointed to serve as Censor in his place for this meeting.

Applications of A. S. Hunt, A. M. Cheney and J. E. Watson were read and referred to the Board of Censors.

After reports of a number of interesting cases with discussion, the report of Censors was read, reporting favorably on the applications, and by ballot the applicants were duly elected to membership.

Next meeting to be held at Jacksonville, the first Friday in May, 1904. Essayists, J. W. Hairgrove, T. J. Pitner and H. R. Gledhill.

Society adjourned for dinner.

Called to order at 1:30 p. m.

A paper on **The Surgery of the Hypertrophied Prostate**, was read by Bransford Lewis, of St. Louis, Mo., Professor of Genito-Urinary Surgery, Marion-Sims-Beaumont College of Medicine, Consultant in Genito-Urinary Surgery to the City Hospital, Female Hospital, Rebekah Hospital, Deaconess Hospital, Mt. Saint Rose Hospital, etc., who said, in part:

The subject presented was one that, although a great deal is heard about it in a general way, the profession at large is made acquainted with it, often, in a very disagreeable way, having to get up at night and take long, cold rides to catheterize such cases.

The acquaintance thus made is neither an attractive one, leading the general practitioner to cultivate it further, nor is it calculated to enlighten him on the subject, making his handling of the next case any easier. As a professional friend remarked in his office the day before, "The prostate is a mean gland, and the more I see of such cases the less I like it."

He said he could think, if he could not talk feelingly on this aspect of the case, as he had been through it and almost got gray-headed when only twenty-five years old, over one case.

This long-distance method of viewing hypertrophied prostate, either through the large amount of literature on the subject, or at the outer end of a catheter is not very illuminating nor calculated to give satisfying and tangible information that we may put to use in the next case.

The general profession is not in a position to get at the subject in a practical way. They do not have numerous post-mortems on such cases, nor do they have a large number of such cases for examination. While formerly viewing the matter in this way himself, the speaker had, during the last two or three years, changed his mind materially, often having operated successfully on some twenty-five such sufferers, who are now well. Several of these cases were cited.

Two gentlemen, both aged 65 years, and one of whom, a judge from Keokuk, Iowa, had suffered from two attacks of uraemia with coma, brought on by a damming back of the retained urine until it had affected the kidneys, were entirely relieved of their trouble by a perineal prostatectomy.

Two gentlemen from Mississippi, old friends, aged 59 and 73, respectively, both suffering with the same trouble, came to St. Louis, and were operated on, both getting complete relief.

Another interesting case came to the clinic in 1901, who had carried a catheter in his pocket for seven years, and who had had his prostate removed by the perineal route some six months previously, by a prominent genito-urinary surgeon, without improving his ability to pass his urine in the least. A perineal fistula persisted from the operation. Cystoscopic examination revealed a projection from the posterior commissure into the bladder. Two incisions were made under cocaine anaesthesia, with the Freudenbergs incisor, inside of one month, with the reduction from complete retention to seven and then to four ounces of residual urine. This still being unsatisfactory, the bladder was opened suprapubically and a collarette of fibro-mucoid tissue was found surrounding the urethral orifice. This projection was burned away by means of the Paquelin cautery, with the result that the patient soon recovered and was able to pass a "delightful" stream.

This case, probably more than any other, emphasizes the fact that no one operation will always be indicated in hypertrophied prostate, but that the operation must be suited to the condition found in each individual case.

The case of a City Hospital patient was referred to. He was 65 years old, his urine 1005 specific gravity and containing albumins and casts. Residual urine was about twenty-eight ounces. The Bottini operation was done, a more radical procedure being thought dangerous because of the renal complication. After a month he had only two ounces residual urine, and urinated only seven or eight times in twenty-four hours, instead of thirty-five times,

as formerly. He was later turned over to a general surgeon, who operated on his large inguinal hernia, which became infected and gangrenous, causing the patient's death. The specimen of the bladder and prostate was secured at post-mortem and was exhibited.

Several more cases were reported, which had been operated on more recently, with the result that they were usually up in from two to three weeks, and were able to urinate in a good, free stream.

It was urged that the profession become more intimately acquainted with the subject and apply the same direct methods to it that the carpenter does to his work.

Diagnosis is made by examining with the finger in the rectum, by the cystoscope and a system of refracting lenses, enabling one to get some view of the intravesicular enlargement, but the amount of obstruction is shown by the amount of residual urine.

The mortality of prostatectomy was formerly high, fifteen or twenty per cent, but during the past five years the subject has been so much better understood and the methods and technic so improved that the mortality has now been reduced to about five per cent. Some writers on the subject report a series of forty or fifty cases without a death.

In answer to the question, "how would you treat hypertrophied prostate?" the speaker said he had as much right to ask, "how would you treat fever?" Just as there are many different diseases and conditions giving rise to fever and each requiring different treatment, so there are various methods of treating hypertrophied prostate according to the conditions existing in the individual case. Some of the indications for the various operations are as follows:

Favorable for the supra-pubic route: 1. General enlargement of the prostate, with extreme intra-vesical projection of the median or lateral lobes, diminishing their accessibility from the perineum. 2. Marked pedunculation of the intra-vesical tumors, with absence of obstruction from other sources.

Favorable for the perineal route: 1. General hypertrophy, involving the median and lateral lobes, without extreme intra-vesical projection. 2. Large or very thick bar formation; marked compression of the urethra between the enlarged lateral lobes. 3. Excessive development of the prostate in the direction of the rectum. 4. In most cases, where the patient is in good general condition and there is not a special indication favoring one of the other procedures.

Favorable for the electro-incision: 1. Cases of extreme debility, unable to stand one of the severer operations. 2. Cases of bar or median sessile obstruction, of not too great dimensions. 3. Incomplete collar formation. 4. As a prophylactic against further obstructive hypertrophy, at the beginning of catheter-life.

The address was made much more interesting and practical by an exhibition of a goodly number of specimens, models and drawings, illustrating the different kinds of hypertrophied prostates, the mechanism of their obstructing

the outflow of urine and the effect of the various operations for the relief of the condition.

F. H. Russell, of Elred, then read a well-prepared and interesting paper on **Sudden Death**, in which he set forth some of the most common causes, also many misleading reports as to actual cause of death.

Both papers were discussed at length by members present.

Society adjourned until next regular meeting.
H. A. Chapin,
Official Reporter.

* Fox River Valley Medical Association. *

Meets second Tuesday in April and October.

Officers.

President H. J. Gahagan, Elgin
Vice President Frank H. Jenks, Aurora
Secretary and Treasurer John F. Bell, Elgin

The Seventy-Seventh Semi-annual Meeting of the Fox River Valley Medical Association was held in Aurora, Tuesday, November 10, 1903, forty-five members being present.

Election of officers resulted as follows: President, H. J. Gahagan, Elgin; Vice President, Frank H. Jenks, Aurora; Secretary and Treasurer, John F. Bell, Elgin.

The matter of affiliation with the State Society was discussed, and finally a resolution was passed asking the State Society to change our relations with the State Society, so that we may represent Kane and McHenry Counties, instead of Kane County alone.

The following paper was read by Julia Meiklejohn, of Elgin.

City Sanitation.

The massing of the population in large cities, that most conspicuous phenomena of modern times, furnishes problems of absorbing interest to the twentieth century physician. What will be the future of our race? The herding together of such vast masses cannot be of unmixed good. Shall we, as a race, deteriorate mentally, morally and physically? These are questions we are asking ourselves.

If we are an honorable profession, we will be seeking ever to uplift mankind. The healing of disease is a most noble work and worthy of all praise, but he who teaches how to prevent disease is engaged in a higher, holier cause. That the people are looking to the physician to solve these vital questions is evidenced by the increasing number of medical men placed in positions of responsibility by the vote of the people. Let us look to it that the trust is not betrayed.

The worst enemy of progress in city sanitation in the United States has been and is political demagogism. When we as a nation shall elect honest, efficient executive heads with a conscientious purpose to protect the health of those dependent upon their initiative, then will we see true progress in municipal hygiene.

What a travesty it is upon our civilization that such calamities should befall any of our

cities as occurred at Ithica, when we lost by a preventable disease the flower of our young manhood. The great loss to our country cannot be estimated in dollars and cents. Be it to the credit of Ithica it is now putting in filtration works and planning to institute a proper system of sewage. How many towns of like size and condition have learned their lesson from Ithica. It needs no prophetic mind to be sure that such calamities will repeat themselves, unless proper sanitary measures are instituted.

The most imperative need of every town is a pure water supply. The sources of such supply may be from small streams coming from uninhabited mountain regions, or nature filtered water as afforded by springs and artesian wells, or by the treating of water from large rivers and lakes; the last for obvious reasons being the most frequent source.

Surprising as it is, not until 1893 was there any effort made in the United States to filter water for other than physical reasons. In that year the city of Lawrence, impelled by repeated epidemics of typhoid fever due to sewage pollution of the Merrimac, from which it receives its water supply, instituted a system of filtration with the direct object of reducing its death-rate. A distinguished engineer has said: "It is difficult to estimate readily how great has been the benefit which this filter has produced outside of the city of Lawrence. It has proved a stimulus and example for many later developments in this field, and it has served as a basis of reference not only in this country but in Europe. No matter how many filters may be built in this country in years to come which are larger in capacity or more efficient or more economical in operation, it is doubtful if any will succeed in displacing the classical position which it now securely holds as marking the beginning of a new epoch, and in fact the first epoch of practical accomplishments in this country in water purification.

As a result of experiments following close on those at Lawrence, two systems of filtration have been evolved offering about equal advantages.

Albany, which has long enjoyed the distinction of having one of the highest typhoid death rates in the United States, completed in 1899 a system of gravity or slow sand filtration, which for efficiency and economy of operation, should be an example for other cities. A few minutes spent in the study of its construction and operation may be of value to us. The plant consists of a pumping station, where the water is pumped from the back channel of the Hudson river into a sedimentation basin with a capacity of 14,000,000 gallons; from here it passes to the filter beds, eight in number, constructed of water-tight masonry. On the floor of these filters are laid loose underdrains, over which are deposited layers of crushed stone and a layer of gravel in three strata of graded sizes; over the gravel is laid a layer of sand.

These filter beds are provided with covers of vaulted masonry; and that these covers were not an extravagance, though they form 30 per cent of the total cost of the filter, is proven by the experience at Lawrence and other places,

where much trouble and expense has been caused by ice forming in the filter. Lawrence in one year paid as high as \$2.00 per million gallons for removal of ice.

The cost of the Albany filter, including covers, was \$45,600 per acre, which is much less than the average cost of European filters.

Philadelphia also, after years of lethargy, is making elaborate preparations to furnish its citizens with a pure water supply through the process of slow sand filtration.

The fact that all waters are not susceptible of the same treatment led to a series of experiments with special reference to mechanical filtration, the first being conducted at Providence, Rhode Island, with the Pawtucket river water, which, in addition to sewage pollution, contains a vegetable stain. The conclusions reached were that mechanical filtration under reasonably favorable conditions would give efficient purification. Following this, experiments were made at Louisville, Pittsburg, Cincinnati and New Orleans. All of these investigations showed the limitations of sand filters in treating muddy waters and the necessity of preparing such waters by means of settling reservoirs and by coagulation prior to filtration by any method. The experiments showed sulphate of alumina a safe and practical agent for coagulant purposes.

New Orleans, in draining its water from the Mississippi river, must meet the particular difficulty of getting rid of from fifty to sixty tons of sub-microscopic clay particles daily. To do this they have adopted the so-called American system, plain subsidence, coagulation, and mechanical filtration.

Mr. George W. Fuller, in an article on Public Water Purification, in the Journal of the American Medical Association, says: "As a general proposition, it may be stated that in the light of present knowledge, practically any water may be successfully purified by some combination of the various processes which have up to this time been studied with care, and at a cost ordinarily ranging from one-half to one and one-half cents per thousand gallons, depending much on local conditions.

So closely identified with a pure water supply is the sewerage and drainage question that no town can well afford to consider one without the other. Mortality rates in cities and towns throughout the civilized world depend to a large extent upon the purity of the water supply and the efficiency of its system of sewage disposal. The constant improvement of mortality statistics in England and many other countries that are making the most progress along this line are undoubtedly due to these two factors.

That the mortality rate from our endemic disease, typhoid fever is alarmingly increasing in the United States is shown by the census report of 1900, which found the increase over 1890 to be 27,056. This should give to our municipal authorities food for serious thought.

Is it an economical measure for tax-payers to refuse sufficient appropriation to secure a pure water supply and an efficient drainage

and sewerage system, when we consider the effect of an epidemic of any of the so-called filth diseases upon a community. The lives of thousands of citizens are lost; many others are placed in jeopardy. Who dares to compute the value of these lives, the effect of this illness upon the community and to the world at large. Besides, business is paralyzed and apprehension as to the return of the disease interferes with the growth of the city or town.

I think it is safe to say that the dollars and cents involved in sickness and death from preventable diseases during the last decade would have furnished a pure water supply and an efficient system of sewerage to every city in the United States.

The plan carried out by many of our cities, especially the smaller ones, of putting down miles of paving, while its back yards are polka-dotted with cess-pools, is like a woman who dons a beautiful garment but neglects the cleanliness of her body. Far be it from me to in any way deprecate the value of street paving. Clean, well-paved, well-sewered streets are always a profitable investment to any city, not only by reason of its greater healthfulness, but by attracting others to the location.

However, we need not take an entirely pessimistic view of the situation. Much well-planned systematic work has been done during the last decade of the nineteenth century; and the twentieth century finds many of the municipal housekeepers in the United States with sleeves rolled up, broom in hand, ready to begin war on dirt of all kinds.

New Orleans, with unusual difficulties to overcome by reason of its location, plans in 1908 to have completed one of the best and most unique systems of sewerage in all the world. Washington, our National Capital, which has long disgraced us by reason of its high death rate, is planning elaborate improvements. Havana has banished yellow fever. New York has solved the problem of the disposal of its city wastes with profit to itself. Its garbage is converted into soluble articles by the New York Sanitary Utilization Company. Its ashes and street sweepings go to make land at Ricker's Island. Paper and certain other refuse are sold under a yearly contract.

Buffalo, N. Y., with a population of 300,000, pays \$35,000 to the Merz Company to receive and dispose of its garbage by the reduction system. Detroit, Mich., with 250,000 population, pays annually \$63,000 for collection and disposal by the same process. Milwaukee, with 250,000 people, pays \$24,000 for disposal by the Merz Company. Practically all the large cities have some good system of garbage disposal, and many of the smaller towns are solving the problem in one way or another, usually by cremation.

Pure food laws are being passed in nearly all the States. Almost every city and many towns and villages have ordinances or board of health regulations concerning its milk supply, though some of these laws are as yet very vague and cumbersome.

Better and more hygienic school houses are

being built. School inspection has been introduced, with successful results, in some of our large cities, notably Boston and Chicago, but a "penny wise, pound foolish" policy has prevented its general adoption. If money is available for safe-guarding the public health in any way, it ought to be available for this purpose. The saving in expense to the city by the prevention of even the minor contagious diseases should form an efficient financial argument for the general adoption of school inspection.

Progress is making, but more is needed. Physicians, are you meeting your responsibilities to your city? The profession has it in its power not only to prescribe municipal remedies, but by putting aside petty jealousies and standing as a unit for all things that tend to the uplifting and betterment of mankind, to do much toward making an ideal city.

When we realize the hygienic possibilities of our environment and with wise forethought plan to quell those forces which make for excessive disease in a crowded center, then will city sanitation be worthy its name.

For data on water purification, I am indebted to the following sources:

A Special Article on Slow Sand Filtration.—Journal A. M. A.

Public Water Purification.—Mr. Geo. Fuller, Journal A. M. A.

The paper was discussed by Geo. F. Allen, Aurora, and J. G. Tapper, of Elgin. A motion was passed directing that a copy be sent to the Woman's Medical Journal for publication.

A paper was then read by C. W. Hawley on **Ocular Reflex Troubles and Their Symptoms.**

C. W. Hawley, Geo. F. Allen and H. L. Pratt were appointed a committee to recommend method of collecting per capita tax and other details not provided for in plan of affiliation with the State Society.

After adjournment the members, with their wives, sat down to a sumptuous banquet.

Frank H. Jenks,
Official Reporter.

 ◆ District Medical Society of Central Illinois. ◆
 ◆

 Regular meetings are held at Pana the last Tuesday of April and October. Membership 143.

Officers.

President J. H. Miller, Pana
 Secretary F. J. Eberspacher, Pana

The District Medical Society of Central Illinois held its twenty-ninth semi-annual meeting in Woodman Hall, Pana, Tuesday, October 27. There were twenty-seven members present, and the meeting was an exceptionally good one.

During the morning session, two patients were presented to the Society. The one presented by Dr. J. H. Miller had an **hypertrophied heart and liver and a mitral insufficiency.** The other, presented by Dr. C. R. Spicer, of Springfield, was a case of **acute anterior poliomyelitis**, in which only the muscles of the right arm were paralyzed.

The afternoon session was taken up with

reading of the papers and their discussion. The Physicians' Civil Liability for Malpractice was read by Dr. Asa S. T. Williams of Vandalia, and the discussion opened by Dr. J. Huber, of Pana.

The Physician's Civil Liability for Malpractice.

The subject of this paper should interest every physician whether he be a general practitioner performing his labors in some remote cross-roads town or whether he be a surgeon of world-wide fame who numbers among his patients millionaires. It is a notable fact that one of the most prominent surgeons of this country was compelled to defend a suit for malpractice while he was president of the American Medical Association and less than a year ago the President of the Illinois State Board of Health had the same experience.

At the present time damage suits seem to be the prevailing fad. The passenger on a railway train who receives the slightest injury institutes suit against the railway company as soon as he catches his breath sufficiently to call a lawyer. Employees on the railway, in the mines or in the factory have ever present with them the hope of damages in case of injury. Even the dealer who sells a vehicle must contribute for any injury the result of an accident caused by a defect in some part of the vehicle.

The doctor who lives a life of self sacrifice, doing errands of mercy no matter how dark or stormy the night who freely gives his services to the poor without remuneration is held to the strictest accountability for sins of omission and commission. The poor fellow catches it coming and going.

It is a well known fact that the man who is popularly known as the "dead-beat" who "never misses a meal or pays a cent" is the one most likely to institute legal proceedings for the least real or imaginary defect in treatment. If this man falls into the hands of a jealous brother physician, and, it is with shame I speak of jealousy among physicians, the least unfavorable comment on the result or merely a shake of the head accompanied with a wise look and the deed is done. A physician has damned his brother and the "dead-beat" proceeds to find a lawyer unless he has previously come in contact with one of the class known as "legal scavengers."

In recent years the x-rays has leaped into prominence in connection with malpractice suits. The x-rays is one of the most important discoveries of the age and in some respects a very dangerous one. At first it was largely in the hands of the specialist but at the present time there is one or more x-ray machines in almost every town of any consequence. It may produce injury in three ways. 1st. Patients have been injured by too long or too powerful exposure from which a number of malpractice suits have resulted. 2. It is now claimed that operators have been injured by too much exposure while treating their patients. This will hardly injure anyone except the specialist himself. 3d. Doctors' reputations and pockets have been injured and I repeat that in this class of injuries the

x-ray is the most dangerous discovery to the profession in recent years.

Some physicians thoughtless as to the fruits of their energy have a habit of examining every old fracture they can hear of and do not hesitate to give the patient an opinion on the same. If such physicians will hunt up a few of their own cases and subject them to the same critical examination they will no doubt be less enthusiastic to test their machine on their brothers' cases.

How few are the fractures that are perfectly retained in position till union takes place. The laity do not understand this and although a patient may have as good use of a limb as before the injury yet when he sees an x-ray picture of his old fracture he imagines he is a cripple for life and promptly brings suit against the surgeon who treated him.

There are a few and I am proud to say only a few physicians who are so void of manhood and professional honor as to use the x-ray to maliciously injure another doctor.

In this class of x-ray injuries we have an absolute prophylactic if the profession will but apply it. If every physician the day he installs a machine in his office will make it a rule to never examine another physician's case except by his consent and if possible his presence and then give the result of the examination to the attending physician and not to the patient we will have little trouble from this source.

It is true that there are cases in which a physician should be justly held for malpractice as in the case of Brooks vs. Clark, in which a judgment for \$5,500 was sustained by the higher courts. The evidence in this case developed the fact that the physician attending at the child's birth tied a ligature around its penis instead of the umbilical cord whereby the gland was destroyed.

If physicians were true to one another it would only be such cases as this of undoubted negligence or unskillfulness that would ever get into the courts.

When a physician for any reason is called to treat a case that has previously been treated by another physician he should **always** know all the circumstances in the case from the physician previously in attendance and even then he should hesitate and think many times before he even so much as betrays his brother with a look. Then if he make any unfavorable comment at all let it be in the presence of the physician first in attendance. He should remember that there are many failures for which he should not hold his brother responsible unless he hold him responsible for an impossibility. We all know that we have simple oblique fractures in which failure may follow the best of treatment. What effect on an oblique fracture would we expect from muscular contraction when it is a well established fact that fractures of bones have been caused by muscular contraction alone?

We may have dislocations that are properly reduced and yet the muscular contraction may be so great that it is impossible to retain the parts in place. Dr. Harvey Reed, of Rock

Springs, Wyoming, reports a case of dislocation of the shoulder in which he failed to reduce it under complete anaesthesia. He afterwards performed an operation dissecting down between the deltoid and pectoralis major muscles to the capsule which was not lacerated and by manipulation of the arm succeeded with very little or no trouble in reducing the luxation. Two days later when the case was examined again the shoulder was again found to be dislocated. Here we have a case in which we know the dislocation was reduced and yet in two days time the conditions were as bad as ever.

The law compels no physician to undertake the treatment of a case except when he is under contract to perform certain specific duties, but when he does undertake such duties be the patient a pay or charity case there is an implied contract: 1st. That he possesses a reasonable degree of skill and learning. 2d. That he will use reasonable and ordinary care and diligence in the treatment of the case. 3d. That in all cases where there is room for doubt he will use his best judgment.

In ninety-nine out of a hundred suits for malpractice it is upon one or more of these three clauses in some form or other that the entire legal battle is waged.

A physician is not required to prove that he is possessed of the highest degree of skill. He is only required to prove that he is possessed of that degree of skill which physicians of ordinary ability and skill practicing in the same or similar localities possess. He is also required to prove that he used reasonable and ordinary care and diligence in the exercise of his skill and the application of his knowledge to accomplish the purpose for which he is employed.

Reasonable and ordinary care and diligence in a given case is such as a competent and reasonably careful physician of the same or a similar locality would give that particular case, and includes the direct treatment of the patient by the physician himself, the instructions to the patient or nurse as to the manner in which he or she should care for the injury during the physician's absence and the exercise of proper care and judgment as to when he may safely discontinue his visits. A physician having undertaken the treatment of a case cannot withdraw from the case except with the consent of the patient or upon giving the patient sufficient notice to employ another physician.

The law requires a physician to follow established modes of practice unless the conditions are so complicated that no recognized mode of treatment will meet the exigencies of the case. Then he must use his best judgment.

The law holds that it is the duty of the patient to submit to examination and treatment by the physician and if the patient refuses to so submit and the physician is thereby prevented from discovering the extent and character of the injury or from applying the proper remedy by reason of which damages result the physician cannot be held liable.

It is also a principle of law that where a patient by his own wilful or negligent act causes or contributes to the injury complained

of he cannot recover damages from the physician.

Since we are any of us liable at any time to be confronted with a suit for malpractice the question as to a method to avoid trouble is by no means an unimportant one. Many physicians put their property out of their own hands. Probably a better plan is to take out an indemnity policy in some insurance company in which case for an annual premium the company agrees to defend you to a certain amount in any damage suit which may result from any work done during the life of the policy. The company assumes entire charge of the case and I understand that they go after the other fellow so rough that he never wants to institute another damage suit.

In summing up I will say: 1st. Do not undertake to treat any case you feel incompetent to handle. If in doubt call a consultant. (2d). If you do undertake it, give it your best care from the first day to the last. 3d. Never guarantee results. 4th. Make your first examination very carefully and thoroughly. 5th. Be especially on your guard when treating "dead-beats." 6th. Use only approved methods of treatments. 7th. Keep a record of every case and especially make note of any evidence of intoxication, carelessness, or wilful act that would influence the result. 8th. Do unto your brother as you would have him do unto you. 9th. If in spite of all efforts to avoid trouble you are compelled to face a suit for malpractice, let your motto be millions for defense but not one cent for hush-money.

Septico-Pyaemia was the subject of a paper read by Dr. G. J. Rivard, of Assumption.

Septico-Pyemia.

G. J. Rivard, Owaneco: Clinically, two forms of Septicaemia are recognized: (1st) Sapræmia, septic or putridintoxication, and (2d) Septo Infection, true or progressive septicaemia.

In **Sapræmia** we have absorptions of poisonous ptomaines; bacteria do not enter the blood, but their toxins do, and as these toxins are true alkaloids, the symptoms and prognosis depend on the dose. The poison does not multiply in the blood, and a drop of the blood of a person laboring under putrid intoxication will not produce the disease when introduced into the blood of a well person, or in other words, the disease is not infectious.

Septic Infection, or true septicaemia, is a true infective process. Toxines introduced from the infected area, as well as toxins evolved by bacterial action, are taken into the blood. We have then, in sapræmia, toxins without organisms, and in septic infection both toxins and organisms, the latter multiplying in the blood. As I have already said, the symptoms of sapræmia depend on the dose, while in septic infection a small number of organisms get into the blood and multiply enormously. A drop of blood from a man with septic infection will reproduce the disease when injected into the blood of an animal, hence it is a true infective disease. No thrombi, or emboli exist in Septicaemia.

Pyemia is septicaemia plus metastatic ab-

scesses. It is characterized by fever of an intermittent type and recurrent chills. It is not due to pus in the blood, but to the taking up of clots infected by staphylococci and streptococci. In what manner do these infected clots cause embolic, secondary or metastatic abscesses? By thrombosis and embolism. Thrombosis is the coagulation of blood in a vessel, which blood clot remains at its point of origin and plugs up the vessel partially or completely. Embolism signifies vascular plugging by a foreign body, usually a blood clot which has been brought from a distance. In an area of suppuration we have suppurative necrosis thrombosis and septic inflammation of the adjacent vessels and the thrombi are infected. A vessel thrombus reaches up to the first collateral branch; the apex of the purulent clot is broken off by the blood stream from that branch and is carried as an embolus into the circulation. It is arrested when it reaches a vessel whose diameter is less than its own and is usually caught just above a bifurcation. A non-septic embolus organizes; a soft embolus may disintegrate and permit the re-establishment of the circulation. A septic embolus breaks down, forms a metastatic abscess and sends other emboli onward.

In Septico-Pyemia we have, according to Dr. Senn's definition, a condition in which the symptoms indicate the presence of both septicaemia and pyemia, and in which the post-mortem appearances point to septic and prevalent infection.

The following cases are illustrations of this condition: On June 29, 1903, a boy five years of age cut the big toe of his right foot on a broken glass jar. On July 1st, at 2 p. m., five days after injury was received, I was called to attend the boy, and found that he had had a prolonged chill, lasting from 10 a. m. to 12 p. m., temperature 104, pulse 130, respiration 35. The cut on the toe was apparently healed, but on removal of the scab four or five drops of pus were found. The wound was washed with sterilized water, peroxide of hydrogen, a one in two thousand Bi. Cl. Sol., curetted and cauterized with a solution of Sodium Salicylate, 48 grs. to 15. It healed without further suppuration. The left arm was found greatly swollen and painful from the elbow to the tip of the fingers. It was treated with Unguentum Crede and hot poultices, continuously applied and frequently changed. On July 10th, an abscess had formed on ulnar side of forearm, which was opened, drained and aseptized, and which healed in six days. The chill which occurred on fifth day after injury was followed by fever of an intermittent type and profuse sweats. There was nausea, vomiting, anorexia, tympanites, diarrhoea, in fact, a typical typhoid condition. The temperature gradually declined until July 14th, when it was found normal. At this time the skin over the entire body was covered with pustules, which disappeared in five days and were followed by complete desquamation.

On July 20th, another abscess formed at the same place where the first developed; it was duly opened, and on further examination, osteomyelitis with necrosis were found. The

arm was treated with simple clean aseptic dressings until such time as the sequestrum had separated from healthy bone, when it was removed. On October 10th the arm was entirely well.

Case No. 2: Adult 30 years of age, injured the end of his right thumb on a barbed wire staple. On the fourth day after the injury the thumb, hand and forearm had swollen very much. On the twelfth day an abscess had formed on the dorsum of the hand, and the eighteenth day another one on the forearm. These were treated in the usual way, with good results. Chronic dyspepsia, in a severe form of several years' standing, was a serious complication in this case. His inability to take and retain water, food or medicine was such that for several days his life was endangered by extreme exhaustion. At this critical time, Trophonine, Panopeptone, Digitalis and Strychnia and mild Saline laxatives were used with good effect. The patient made a good recovery.

Case No. 3: A coal miner, aged 35 years, weight 198 pounds, a Pole, bruised a knuckle while engaged at his occupation. He continued to work for three days, when his hand, forearm and arm were very much swollen. He then applied for treatment. Four abscesses formed, one on the back of the hand, two on the forearm, and one at the elbow. He was a firm and practical believer in the efficiency of alcoholic stimulants in septic infection, he being under the influence of alcoholic liquors at various times during his illness. However, he fully recovered, after having lost in weight eighty pounds in twenty-one days.

The case of the late N. H. Henderson, of Chicago, was a typical one of Septico-Pyemia. On the thirteenth day of May, while operating on a case presenting symptoms of a severe general septic intoxication, his first finger of the left hand became infected. On the fifth and eleventh days the finger was lanced, a dark looking serum only being formed. On the seventeenth day a chill, moderately severe and prolonged, occurred, followed by temperature 103.4. On the eighteenth day he complained of pain and tenderness over left costo-sternal articulation. The soft tissues of the chest became swollen and oedematous and skin redened. Drs. Wm. M. Harsha, J. B. Murphy, N. Senn, Morgan, Lydston, Ferguson and McArthur were called. Three operations were performed at different times, for the establishment of drainage and removal of necrosed bone. No pus was found, but an abundance of dark-looking serum, a culture of which showed a pure streptococcus infection. On June 18th, thirty-five days after infection took place, a tender point and a small nodular swelling was formed in the calf of the right leg. This was followed by many other nodular enlargements in the arms and legs and in other parts of the body, and a few pustules under the skin, while small areas of redness formed under the skin, due to infection of arterioles. The medical treatment consisted in the free use of alcoholic stimulation, the injection of antistreptococcus serum in very large doses, rectal and subcutaneous administration of normal salt solution, injunction of unguentum crede and the administration of

nuclein solution. Prof. Matthews, of the Chicago University, made an intravenous infusion of salt solution. The doctor died of cardiac failure on the 23d day of June.

In the surgical treatment of Septico-Pyemia, we must open, drain and aseptize any wound and any accessible secondary abscess. In the medical treatment we must prevent the lowering of the resisting power of the individual by auto intoxication. This is best accomplished by keeping the bowels and kidneys active. It being an established fact that the temperature of the body must be higher than normal to render possible the sudden and gradual destruction of many species of bacteria, it necessarily follows that if the temperature is lowered, infection of the body is favored, consequently the use of too active measures for reducing temperature is contraindicated. In regards to serum therapy, I believe we have no reliable antistreptococcic serum.

Many surgeons recommend alcohol as the most potent medicinal agent in the active combat with septic infection. I believe the most efficient remedial agents consist in the use of digitalis to strengthen a weak heart, strychnia to stimulate and tone up the nervous system, and proper feeding.

Thrombosis of the Femoral Vein, Coming on After Delivery, Causing Gangrene of the Leg, Amputation of the Thigh, and Recovery, was the subject of a paper read by Dr. G. N. Kreider, of Springfield, and was interesting in that it still promises us good results in cases that were heretofore considered hopeless. He advocates amputation above the knee, even though there is great prostration. Dr. Eddy's discussion of the paper coincided with the opinions of the writer.

Gall Stone Disease, with Special Reference to Its Early Surgical Treatment, was the title of an exhaustive paper written by Dr. F. Buckmaster, of Altamont, and the paper was highly commented on by Dr. Kreider, who opened the discussion.

The Report of a Case of Tetanilla, by Dr. E. J. Brown, of Decatur, was the last paper on the program. Although these cases are rare in this country, the Dr. has seen these cases in his own practice.

The Board of Censors reported favorably on the following, all of whom were elected to membership to the Association: F. Buckmaster, Altamont; J. W. Colbert, Jacksonville; Lothors L. Morey, Vandalia; Matt M. Hill, Taylorville; C. M. Seaton, Pana; O. S. Crow, Assumption.

A motion, moved and seconded, that the President appoint a committee to prepare a banquet for our next annual meeting in April, 1904, carried. Also a motion that the Secretary be instructed to write a letter of sympathy to Dr. O. W. Furgeson, of Mattoon, Ill., carried by the Society. The Society adjourned, to meet the last Tuesday in April, 1904.

F. J. Eberspacher,
Official Recorder.

Scott County Medical Society.

Regular meetings are held in Winchester on third Tuesday of October and April. Membership 10.

Officers.

President Jas. Miner, Winchester
Vice President G. M. Straight, Winchester
Secretary J. P. Campbell, Winchester
Treasurer G. C. Brengle, Winchester
Member Legislative Committee, W. C. Day, Winchester.

The Scott County Medical Society met October 20 and was called to order by the president, Dr. Miner, at 2:30 p. m.

Minutes of previous meeting read and approved. It was announced by the president that Dr. W. C. Day had been appointed a member of the Legislative Committee of the State and National organizations.

Dr. L. J. Harvey, of Griggsville, Ill., being present he was asked to address the Society.

The doctor gave a very interesting address on the subject of **Organization and Its Benefits** showing the importance of united effort in bettering the profession.

He emphasized the importance of the County Medical Society as that is the basis of State organization and the only gateway to the State and National Societies.

A motion was made and carried that the election of officers be postponed until the regular meeting in April, 1904.

The regular program was then called and Dr. W. C. Day presented the subject of **Abortion** to the Society for its consideration.

The doctor's address was very interesting and instructive and was well received.

All present took part in the discussion which followed.

Alton Medical Society.

Regular meetings are held second Thursday of each month at 8 p. m. Membership 25.

Officers.

President T. P. Yerkes, Upper Alton
Secretary Homer W. Davis, Alton

Indications for Surgical Interference in Appendicitis.*

H. W. Davis, Alton: Appendicitis is now considered a surgical disease and the disputed point is not as to whether surgical interference is advisable but as to the best time to operate. American surgeons advise operation in every case where the patient is seen early, i. e., within the first thirty-six hours of the disease, because the infection at that period is still confined to the appendix and the patients condition is good. Consequently the mortality from operation is nil. Moreover no one can foretell the future course of the disease however mild it may be in its incipency.

The English surgeons are more conservative if Sir Frederick Treves may be taken as a representative. He recommends immediate operation in the ultra-acute cases only and a waiting

policy, in the milder cases, until the fifth day or later before deciding the question of operation.

As regards the treatment in cases coming under observation later than the first thirty-six hours of the disease American surgeons differ. Many carry their policy of immediate operation into every stage of the disease and would operate on every case provided the patient is not moribund. On the other hand there are some who refuse to operate during the active stage but wait for the symptoms to subside. Most prominent among these is Dr. A. J. Ochsner, of Chicago, who controls the course of the disease by gastric lavage, and rectal feeding until such time as the prognosis of operation is more favorable.

The general practitioner of our smaller towns and cities is probably justified in taking the more conservative view in regard to operation because of the lack of the best facilities, assistants, and skilled experience. The patient's consent is in many cases refused and he has a horror of hospitals. The waiting policy and "Ochsner treatment" must therefore be followed where under other circumstances immediate operation might be advised.

*Synopsis of a paper read before the Alton Medical Society at its regular session when the other physicians of Madison County were invited to be present.

Geo. E. Wilkinson,
Official Reporter.

CHICAGO ITEMS.

Dr. F. Gurney Stubbs was elected a Professor of Otolaryngology in the Chicago Eye, Ear, Nose and Throat College, October 9, 1903.

Income of Chicago Physicians.

The Chicago Tribune recently printed the following interesting statement:

One of the leading physicians of Chicago was asked for an estimate of the incomes of some of the most representative of his fellows. Estimating the number of physicians and surgeons at 4,000, he prepared a little table that is especially comprehensive:

No. of Physicians.	Annual Incomes.
3	\$50,000
15	25,000
50	15,000
250	5,000
550	2,500 and over
550	1,500 and over
2550 less than	1,500

Dr. F. H. Martin Seeks to Enjoin Publisher from Issuing Work Poorly Printed and Bound.

Declaring that the mechanical appearance of his new book will injure his reputation, Dr. Franklin H. Martin recently applied for an injunction to restrain George H. Cleveland, the publisher, from selling or otherwise disposing of any copy.

Dr. Martin, who is secretary and a member of the faculty of the Post Graduate Medical school, alleges he has spent ten months and \$1,500 in the preparation of the drawings and text of a work on gynecology. He says Cleveland was to receive for sale 2,000 copies of the

book, and was then to release his interest in the publication.

Dr. Martin avers the book is printed on inferior paper, with a poor grade of ink, and also is poorly bound. He alleges the quality of the workmanship is liable to excite unfavorable criticism, bring him into disrepute among other physicians, and also hurt his practice and injure him in other ways.

Unfortunate Error.

Mattoon, Ill. The 2-year-old son of Mr. and Mrs. James Welch is dead as a result of a mistake in medicines, the child being given bichloride of mercury instead of calomel, as was intended by the physician. At the coroner's inquest the attending physician testified that he prepared a box of calomel tablets and also a box of bichloride tablets for use in another case.

After he had prepared the medicines he picked up the two boxes to mark them with directions, and gave them to the mother to give her child. Instead of picking up the box of calomel, however, he picked up the bichloride of mercury. The mother of the child gave this medicine.

New Incorporations.

The Secretary of State at Springfield has licensed the following corporations:

Arnolds Zymotoid Company, Rockford; capital, \$25,000; object, manufacturing medical preparations; incorporators, William B. Arnold, J. A. Klingstedt, Edgar M. Swan.

The Anti-Septo Medicine Company, Chicago; capital, \$25,000; manufacturing proprietary medicines; incorporators, J. P. Jones, W. W. Benjamin, W. H. Hamilton.

Hospital Benefit Association, Chicago; capital, \$5,000; object, conduct a hospital; incorporators, Louis Thexton, De Witt G. Porter, Frederick J. Bentley.

Illinois Society of Certified Public Accountants, Chicago; object, mutual protection; incorporators, Lawrence A. Jones, J. Porter Joplin, Edward E. Gore.

Sifoleum Remedy Company, Chicago; capital, \$25,000; object, manufacturing medicines and chemicals; incorporators, Wharton Plummer, H. J. Kendig, Ernest Langtry.

Lebrons Health Company, Chicago; capital, \$100,000; object, manufacturing patent and proprietary medicines; incorporators, H. C. Mackey, F. W. Weeks, Edward Marshall.

Chippewa Indian Pill Company, Chicago; capital, \$2,500; manufacturing proprietary medicines; incorporators, William H. Beekman, Henry J. Barr, William S. Hay.

Hermit Remedy Company, Chicago; capital stock increased from \$10,000 to \$25,000.

Chicago Barrel and Box Company, Chicago; name changed to Dr. Gossom company; object, changed to manufacturing proprietary medicines.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.
Membership, 1519.

OFFICERS:

R. B. PREBLE, 103 State Street..... President
FRANK X. WALLS, 4307 Ellis Avenue.....Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....Treasurer
W. A. EVANS, 103 State Street. Chairman Medicolegal Committee
WM. HARSHA, 103 State StreetChairman Membership Committee

DECEMBER, 1903.

A regular meeting was held October 21, 1903.
Papers were read and discussed as follows:

Septic Endocarditis.

Abstract.

R. S. Dubs read a paper on septic endocarditis, and presented microscopical and macroscopical pathologic specimens of the case. The case was of great interest, because of a complete history from the patient's first sickness to his death. Patient's mother has been afflicted with rheumatism for ten years or more. Patient himself, a man of 30 years, had enjoyed the best of health previous to his first attack of rheumatism in the fall of 1902. During this sickness, which yielded fairly well to the salicylates combined with the alkaline treatment, there was a slight systolic bruit at the apex, noticed now and then only. In the winter of 1903 he had a second attack of rheumatism, subacute in character, and lasting several months. As in the former attack, the slight bruit was again noticed at times. In March, patient went to Mount Clemens, and came back apparently cured. While there he injured his left elbow, and had an open pusing wound for several weeks. The wound did not heal until he had been back in Chicago for several weeks. In the beginning of May, 1903, he was taken with chills and fever. For two weeks his sickness gave a picture of a sepsis. Nothing pointing to a more definite location of the sickness than the systolic bruit heard at the apex of the heart. The absence of malarial plasmodia and the failure of quinine excluded malaria. The irregular pyrexia with rigors, the polynuclear leucocytosis, made a sepsis very probable. The first embolic process was noticed in the third week, in that pus and blood were found in the urine after a chill. This, in connection with the systolic bruit at the apex, fairly well established the diagnosis of septic endocarditis. As the sickness advanced, dilatation of the heart became more noticeable. On the 25th day, during a severe chill, the right anterior valve of the aorta was ruptured. The sudden incompensation thrust upon the heart gave rise to most distressing symptoms. On the thirty-first day of the sickness a pericarditis was ushered in under symptoms of great cardiac distress and collapse. The dilatation of the heart was extreme, and the post-mortem showed that it extended from the right mamillary line to the left

side of the thorax. The microscopical examination showed the presence of streptococci in the varicosities of the aortic valve, also beginning organization of their fibrinous masses. The interesting features of the case were, first, that we have a lesion of the aortic valves only, whereas the systolic bruit was heard at the apex alone for many weeks, and was always loudest there. Second, that the aortic valves alone were affected, no other valves being embraced in the ulcerative process. Third, the clinical picture would seem to show a marked difference between a rheumatic endocarditis and a septic endocarditis. If, as has been presented, the septic infection of the valves was subsequent to the diseased condition caused by the rheumatism, we would consider the bacteria as having found entrance through the pusing wound of the left elbow. If, however, it be taken for granted that the cause of the heart trouble was due to the streptococci found in the post-mortem examination, from the time the first systolic bruit was heard, in the fall of 1902, it would be difficult to explain the joint symptoms in any other way than that they were caused by these same streptococci. That these joint lesions caused by streptococci should be affected by the salicylates is contrary to clinical evidence. This would seem to establish the fact that in this case the endocarditis during the attacks of the rheumatism was due to a different agency than the streptococci found upon the valves in the post-mortem examination.

Discussion of the Paper of Dr. Dubs.

Maximilian Herzog.—I want to demonstrate the heart from the case which Dr. Dubs has just reported. It is a typical specimen of an endocarditis both "valvularis et parietalis." It shows, as you will notice, the changes described by Dr. Dubs. In order to make a microscopic examination, it was necessary to remove some of the thrombotic masses, and in so doing I had to cut into the opening made into the aortic valve by the destructive endocardial ulceration. You can see that there is an ulceration in the wall of the heart, right under the valvular thrombi. If you place your finger into the aneurysmal dilation you can feel the bulging into the right auricle. Turning now to the outside of the heart we see that the parietal layer of the pericardium is covered by fibrinous masses. A section of this pericarditis can be

seen under the microscope. The specimen shows on the outside the myocardium, then the pericardium, composed of fibres; next a layer of granulation tissue and then a thick layer of fibrin which probably existed there before it could be diagnosed by auscultation because there is beginning organization of the fibrin. This organization shows that the pericarditis must have existed some time before death. I want to show another interesting specimen of endocarditis verrucosa in which there is little or no ulceration. This form of endocarditis frequently heals, and I have here another specimen showing a healed endocarditis verrucosa. The history of this case is as follows: At 15 the patient had acute articular rheumatism. At 17 years he applied for admission into the German Military Academy, but was refused entrance on account of a valvular heart lesion. He lived for thirty more years, and here is the heart showing an aortic insufficiency and stenosis. The heart also is enormously hypertrophied.

As to the etiology of endocarditis: We know that a variety of organisms cause endocarditis; *Streptococcus*, *staphylococcus*, *pneumococcus*, *typhoid*, *colon bacillus*, *bacillus pyocyaneus* and *gonococcus*. Early during the bacteriologic era investigations were made with the view of ascertaining the cause of endocarditis. A few observers, especially Weichselbaum, found bacteria as the cause of endocarditis. In 1885 Wyssopowitsch examined a number of cases of endocarditis ulcerosa and verrucosa. He found no microorganisms in the latter, although he did in the former. From that time dates the clinical division of endocarditis into the benign and malignant forms. At the present time it is conceded by most observers that every case of acute endocarditis verrucosa and ulcerosa is due to bacteria. The same is true of the endocarditis complicating acute articular rheumatism.

Dessy, in 1894, examined 22 cases, and found bacteria in 20; 14 were of the verrucose variety; 6 of the ulcerative. Harbitz examined 54 cases, and found bacteria in 39. Singer examined three cases of endocarditis verrucosa, and found bacteria by culture in all. Leyden examined 5 cases following acute articular rheumatism, and found bacteria in all, but obtained a culture in only one case. Bartel examined 23 cases, of which 5 were of the verrucose variety and of rheumatic origin, and found bacteria in all.

If, then, bacteria are found in all forms of endocarditis, the verrucose as well as the ulcerative form, we should not distinguish between benign and malignant varieties. This classification must be abandoned. I believe there is only one author who still claims that endocarditis following acute articular rheumatism is not of microbic origin, and that is Lenhartz.

I made two blood examinations of Dr. Dubs' case. In the first examination there was found a leucocytosis of 14,000 (due to an increase in polynuclear neutrophils). I inoculated culture tubes, but failed to get a growth. Even if streptococci are present, they often do not grow; the coccus found in endocarditis following acute

articular rheumatism is believed to be a special variety of streptococcus which will not easily grow on the usual media. In the sections under the microscope you will find enormous masses of streptococci.

There is a possibility that the endocarditis in this case was not due to the lesion which occurred shortly before death, but to the first attack of acute articular rheumatism. An endocarditis may exist for some time without physical signs. As long as the valves close perfectly, even when thrombotic masses are present, there is not much to be learned by auscultation. Such cases sometimes appear to get well; organization takes place in the thrombi, but some bacteria remain there, and under favorable conditions they develop and the result is a recurrent endocarditis. I am strongly inclined to believe that in this case we were dealing with such a recurrent endocarditis.

F. S. Johnson: This is an extremely interesting subject. I think that most writers are agreed that acute articular rheumatism is an infectious disease, and in that case the endocarditis is also of infectious origin. The change in the character of the heart action, as described by Dr. Dubs, was, manifestly due to a superinfection, the primary trouble also having been due to an infection.

Dr. Dubs (closing the discussion): Dr. Herzog tells us what he thinks it ought to be, but, surely, clinical observation is what we have to deal with, and it should count for more than mere belief. Consider the symptoms of another case, the patient is present, and the results that accrued from internal treatment. In the course of an articular rheumatism, involving several of the large joints and also some of the phalangeal joints, there develops an acute endocarditis on the basis of a valvular lesion, remaining from a former attack several years ago. The apex beat is in the anterior axillary line, the dilation to the right in the right parasternal line. There is orthopnea combined with other distressing symptoms of failing circulation. Under heroic doses of salicylates, the picture completely changes within forty-eight hours, the fever and all distressing symptoms disappearing, and patient going on to a complete recovery. How could such an endocarditis be caused by streptococci, forsooth? Surely, they could not all be killed absolutely in forty-eight hours.

These septic cases are different from the verrucose variety. The former involves the whole heart, encroaching on the heart walls, whereas the latter is confined to the valves. That leads me to think that there must be a difference in the cause. Even when the bacteriae are found post-mortem, that does not show that they are causative. A case like mine, with metastatic symptoms and advancing steadily, is surely clinically different from a simple endocarditis consecutive to acute articular rheumatism. Why not a difference in the etiology, too? There is a difference between a septic joint and the joint of rheumatism. I believe that Lenhartz's position is a good one. He says that he invariably finds germs in the blood by means of cultures in cases of septic endocarditis. When he cannot find them in the blood

by making cultures during life, then he does not find them at the post-mortem when it is made directly after death. So I am convinced that the position taken by Dr. Herzog, that this endocarditis presented tonight was caused by streptococci from its very beginning in the fall of 1902—only a few cocci being present at first and during the interim, is not clinically tenable.

The Early Diagnosis of Typhoid Fever.

Abstract.

Edward F. Wells, Chicago. The early diagnosis of typhoid fever is of prime importance to the patient, the community and the physician, for various and obvious reasons. The present status of this problem is markedly different from that presented a generation ago, and it probably is not simplified nor made easier. Formerly the malady was more severe and with a clearer cut symptomatology. Now, with a less accentuated symptomatology diagnosis often hesitates until relief comes from the several recently established diagnostic aids. On the whole we probably now attain, with increased labor and difficult labor, as early and reliable results as were formerly obtained by less laborious methods.

In the early diagnosis of typhoid fever first place must be accorded the medical history of the patient, including his environment; the mode of onset and the symptoms presented. The probable diagnosis thus attained may be rendered certain by the gradual development of the diazo and Widal reactions and the recovery from the blood and urine of the typhoid bacillus. In my hands the gradual development, from day to day, of the diazo reaction has enabled me to anticipate by two or three days the information to be given by a typical reaction, and the same probably applies to the Widal reaction. The cultivation of the typhoid bacillus from the blood and urine is the most positive of the distinctive signs and guarantees from the errors which may creep into the diagnosis through dependence upon the diazo and Widal reactions. By attention to these measures the diagnosis should be made during the first week of the attack.

Discussion of Dr. Wells' Paper.

Maximilian Herzog: One important laboratory test for typhoid has not been mentioned; a test which in the hands of a few observers has been attended with excellent results. It is the bacteriologic examination of the blood by culture methods. From 5-10 c.c. of blood are inoculated into suitable culture media; in a large percentage of the cases a culture of the typhoid bacillus was obtained even before the Widal reaction appeared. So that in blood examination we have a method of diagnosing typhoid before the appearance of a positive Widal. Unfortunately such an examination is confined almost exclusively to hospital cases.

I fully agree with Dr. Wells as to the usefulness of the diazo reaction, but it may be misleading and make us believe that we are dealing with typhoid when we are not. A few years ago an assistant of Leyden found that in from 40 to 50 percent. of all cases of acute military tuberculosis we get a positive diazo reaction. The insidious onset of acute military tuberculosis frequently suggests typhoid, and a positive

diazo test assists further in leading to a wrong diagnosis.

I wish to contradict one statement made by Dr. Wells, that the anatomic lesions of typhoid and paratyphoid are the same. That is not the case. The anatomic lesions of typhoid are swelling and ulceration of Peyer's patches; swelling of the spleen and mesenteric lymph glands due to an enormous proliferation of the endothelial elements in these structures; together with the presence of large endothelial phagocytic cells containing red corpuscles and mononuclear cells. Only a few cases of paratyphoid fever have come to autopsy, but in nearly all there were no intestinal lesions; in those cases in which the intestine was affected the lesion was in the neighborhood of the ileocecal valve and was similar in type to dysenteric lesions. There was no swelling of the mesenteric glands or spleen, except in one of the cases reported the spleen was enlarged, but this enlargement was not due to the presence of proliferated endothelial elements.

F. S. Johnson: I wish to emphasize one or two things brought out in this connection. First, that typhoid fever is less severe in Chicago today than it was twenty years ago. Second, I wish to call attention to the fact, as mentioned by Dr. Wells, that the typhoid infection sometimes is sequestered and latent; the patient does not sicken until sometime afterward. I think that at least some of the cases with sudden onset are due to a preceding sequestration of the infection. The disease remains latent for a time or causes only mild symptoms which are overlooked. Illness suddenly develops, ushered in by a severe chill and followed by pronounced symptoms of typhoid. The onset may be induced by some debilitation of the nervous system by fright, unusual fatigue or exposure, permitting this latent infection to assume activity.

The time when the Widal reaction makes its appearance is variable. In the ordinary case of typhoid we know when the reaction is to be expected, but it is the unusual case that puzzles us. I have in mind that of a boy who had attended a preparatory school where there were a number of very severe cases of typhoid. He came home feeling well, but soon after developed a mild fever which was continuous for sometime, but which did not confine him to bed or even to his room or the house.

A positive diagnosis could not be made, although I made a tentative diagnosis of typhoid fever. He had a few rose spots and a slightly enlarged spleen; still the case was very indefinite. Repeated Widal examinations were negative. A final examination was made at the end of the illness, the Widal was positive showing that the conditions upon which it depends may be cumulative and that the reaction may not appear until late, in fact, not until the patient is well.

F. S. Churchill: I should like to emphasize the importance of the laboratory methods in detecting typhoid fever in children because, here the clinical picture is almost invariably atypical. In many cases the diagnosis is absolutely impossible without the aid of laboratory methods. The onset is often sudden. The epistaxis

and the rose spots may be present or absent; the enlargement of the spleen may not be evident and frequently we would not know with what disease we are dealing without resorting to laboratory methods.

Of these methods it seems to me that the bacteriologic examination of the blood, the Widal reaction and the leucocyte count are the most valuable. In a series of about fifty cases in which I examined the blood recently, I got some very interesting results. The average leucocyte count during the first week was about 7,000; during the second week it was a little lower. In the third week it rose again until in the fifth week it reached the normal.

As to how early the Widal reaction appeared, I cannot say. Most of my cases were observed in the hospital and from those patients it is impossible to get the exact date of the onset of the disease, although as a rule you can do this more easily in children because of the sudden onset of the disease. The cases I had in private practice were too few to be of much value in drawing conclusions. In one of these cases, however, in which the onset was very sudden and took place exactly nineteen days after the exposure, I got a leucocyte count of 6,000 on the second day, and 6,400 on the fourth day. I did not get a positive Widal reaction at that time.

With regard to the behavior of the different kinds of leucocytes, my observations differed from those reported by Dr. Wells. During the first week there was a slight rise in the percentage of the neutrophils; a slight fall in mononuclears. This continued into the second week and then a drop and rise of neutrophils and mononuclears respectively began and continued until the third or fourth week when the two curves crossed each other. The neutrophils fell as low as 47 per cent and the mononuclears rose to 49 per cent. So that in children the differential count of the leucocytes would not be of much value in the early diagnosis of typhoid. I think that the general leucopenia however is of very great importance, because in children we almost invariably get a leucocytosis with every febrile affection, and when you have this indefinite fever curve with leucopenia the evidence points strongly to typhoid.

The early diagnosis of the disease is a matter of great practical importance. Many cases of typhoid may run their course entirely unrecognized and it would be impossible to find them out were it not for the laboratory methods. These unrecognized cases are a source of great danger to the community. With the excellent facilities we have in the city laboratory for making the Widal test, it seems to me that there is no excuse why, in Chicago at least, any case of typhoid should go unrecognized.

W. A. Evans: Unfortunately I did not hear all of the paper and consequently I am not in a position to discuss it. I noted what Dr. Wells said with reference to the difference in reaction between typhoid and paratyphoid. I think it has been demonstrated conclusively that here in Chicago we must take account of paratyphoid. Several cases of proven paratyphoid fever have occurred here. When the Widal reaction first began to be used generally we were disappointed in that certain cases that were clinically

typhoid did not give the Widal reaction. An explanation of many of these cases is the existence of this allied affection, paratyphoid fever, which does not agglutinate typhoid bacilli nor all of the colon or paracolon bacilli. Two or three groups of paratyphoid bacilli have been isolated. The serum from one group does not agglutinate the bacilli of the other groups readily. It does it in rather concentrated solutions but not in the dilutions we are accustomed to using in making the Widal test.

This question is more of academic than of practical interest. There seems to be no question but that the possibility of a paracol infection made matters worse in the Ithaca epidemic. Proper precautions would have been taken earlier in that epidemic had it not been for an academic discussion of the nature of the infection. We must not lose sight of the fact that a case of paratyphoid fever, while it differs in some respects from typhoid fever, must be handled from the hygienic standpoint in exactly the same manner as typhoid fever.

There seems to be no way of making a diagnosis of paratyphoid except by laboratory methods. DeFeyfer and Kayser report that in their epidemic of paratyphoid fever chills and sweating were more pronounced than in typhoid fever. Yet there is no man who has had considerable experience with typhoid who has not found a considerable number of cases in which, entirely independent of secondary infection, chills and sweating have been present. There seems to be no one symptom, or combination of symptoms by which paratyphoid fever can be recognized and diagnosed from typhoid fever, except by the laboratory procedure, blood examination.

It is possible that not enough stress has been put upon the matter of variation in the proportion of leucocytes in febrile affections. I believe that there is no question that if we study this variation more closely that we can occasionally make a diagnosis of typhoid more promptly than we do at the present time. But this is a procedure that is not possible of wide application at the present time, although we are progressing very satisfactorily in this direction. Diagnoses of typhoid fever are being made very much earlier than formerly, and with much more certainty, and for this we have to thank a general spread of more accurate information.

W. K. Jaques.—In those cases which we recognize as walking typhoid, the diagnosis is almost impossible without the Widal reaction. The symptoms to which your attention has been called do not occur with sufficient prominence to make possible a diagnosis.

During the last epidemic of typhoid in this city it was found that a large number of children in a certain part of the city also were affected to a certain extent. An examination of the blood of these patients showed that they were suffering from walking typhoid. Some had enlargement of the spleen and some did not. Some had rose spots and some did not. It seems to me that the Widal reaction has not been given quite the prominence by the author that it should have. The Reaction occurs much earlier in the majority of the cases than he

stated. We have found it present as early as the third, fourth and fifth day; in the majority of the cases before the end of the first week.

The recognition of the typhoid bacillus in the urine as early as the second, third and fourth day has not been my experience. I have endeavored to isolate the bacillus from a number of cases in the early stages, but have been unable to do so as early as this. Now that we have to take into consideration paratyphoid fever and these other conditions, I think that the Widal reaction is the most positive and the most valuable of all the methods we have for diagnosis.

In making a diagnosis we must consider two factors: First, the virulence of the infecting agent; second, the resistance of the person affected. These two factors are very variable, and therefore the type of the disease will also vary, especially in communities. Typhoid in Chicago will be one type, and typhoid in the army barracks will be another type.

Prof. Koch, by means of typhoid blood, was able to identify the typhoid bacillus in the feces of 80 per cent of the inhabitants of a town suffering an epidemic of typhoid fever. This indicates that only a small percent of those taking in the disease germs are susceptible. It is as difficult to recognize the mild type of the disease without the Widal reaction as it is to identify the typhoid bacillus in feces without the use of typhoid blood.

Dr. Wells (closing the discussion): A paragraph in my paper is given to the consideration of the making of blood cultures for the purpose of diagnosis. That the anatomic lesions of paratyphoid fever may be similar to those of typhoid might be inferred from some of the symptoms, as e. g. hemorrhage, which have appeared in some cases, and by the findings in some of the cases that went to autopsy.

On the whole, however, my paper was intended to bring out the signs and symptoms by which we could make the earliest possible diagnosis of typhoid fever. I did not intend to include, to any material extent, those cases of typhoid fever which had extended over a considerable period of time and in which the diagnosis can be made easily. I believe that it is possible to diagnose typhoid fever in private practice at a somewhat earlier date than is supposed generally.

Dr. Moyer's paper on Chronic Brass Poisoning; Brass Moulders Ague, and Dr. Keys' discussion of it, have not been received.—(Ed.)

Discussion of Dr. Moyer's Paper.

J. M. Lavin: All the blood examinations that I made in this case were negative, except a slight haemaglobinemia about 70 per cent. There was no granular degeneration of the cells such as is found usually in lead poisoning.

The treatment of this condition is practically the same as that of lead poisoning. The brass-worker appreciates the fact that milk is a good remedy. As soon as he notices the first symptom coming on he goes home and drinks milk. Some have used potassium iodide and have found it useful.

E. S. Talbot: Having been a brass worker

in my younger days, I wish to say a few words. Dr. Keys is correct in regard to the fine dust particles taken into the system. The essayist spoke of the moulder inhaling the fumes while the metal is hot. This is also true in polishing and other methods in the preparation of the brass for its various uses. The infection may occur both by the fumes and the dust. The effect on the gums is interesting. Since the alveolar process is a transitory structure, the arteries and nerves which pass through it terminate at the roots of the teeth, and are therefore end organs. The brass which is taken into the system in fine particles accumulates in the arteries of the gums causing the green color just as the red color in mercurial poisoning and the blue in lead poisoning is produced. The color upon the teeth is due entirely to the inhalation of the fumes or particles.

The infection of the gums when the system is saturated with poison is interesting because it is one of the first symptoms induced.

Copper poisoning effects the nervous system quite markedly, rarely to the extent of paralysis agitans. Chills are common, constipation or diarrhoea, vomiting frequently occurs.

The brass worker understands thoroughly how to care for himself. When the first symptoms of poisoning appear, he takes purgatives and emetics and therefore is able in most cases to ward off a long and serious illness.

Julius Grinker: In connection with chronic brass poisoning I am reminded of a case that was a puzzler. When I first saw the man he was a perfect dement. He presented the psychic picture of dementia paralytica but without its somatic symptom. He knew nothing and nobody, not even his own family. There was no history of syphilis or alcoholism. He had ten children, all of whom were alive and well. Three months after the onset of this condition he became violent necessitating his removal to an asylum. I could not make a positive diagnosis. I could not interpret the symptoms, which were those of a psychosis of a rather mixed type, for he also suffered from a severe and continued melancholia, which became apparent during his lucid intervals. That was eleven years ago; today he is perfectly well.

I learned subsequently that after he was sent to the asylum the physicians ascertained that he had been a brass-worker and they sweat him often and hard, weakening the man considerably. The patient told me that after each sweating there was a layer of "green stuff" on his skin. I did not see this, but that is quite probable. It occurs to me now that this must have been a case of chronic brass poisoning in which the intoxication was confined to the nervous system producing a picture of dementia. Upon close inquiry for the symptoms preceding this attack of insanity I also elicited the fact that the patient had suffered for some time from chills occurring at irregular intervals. It appears to me now that my case might properly be called Brass Workers Ague, plus dementia.

Dr. Moyer (closing the discussion): Dr. Keys question has been answered by Dr. Talbot. Some writers say that the disease does not occur among polishers, but that is not cor-

rect. It does occur in the polishers and also in those exposed to the fumes. The case reported by Dr. Grinker may have been one of chronic brass poisoning.

The Mechanic Moments in the Cystoscopic Treatment of Kidney and Ureteral Diseases.

By Dr. Gustav Kolischer, Chicago.

Abstract.

The direct local treatment of ureteral and kidney diseases by the aid of the cystoscope and the ureteral catheter is still not as popular among the surgeons as should be expected. Possibilities of this method may be summed up as follows: Cases of pyelitis especially those of gonorrheal origin will heal up under repeated flushings of the kidney pelvis through the ureteral catheter.

Impacted ureteral gravel can occasionally be loosened by the ureteral sound, the same holds good of ureteral stones. The authors method of running a catheter up to the impacted stone, and then injecting vaseline oil has been repeatedly successfully employed by the essayist and others. This method in releasing the impaction meets a vital emergency in removing the cause of reflectoric, bilateral anuria without exposing the patient to so dangerous an operation as ureterotomy. Ureteral catheterization and flushing may be used in order to remove pus plugs. Certain cases of ureteritis can be cured by injecting antiseptic solutions into the diseased part of the ureter. The results in ureteral strictures are still far from satisfactory on account of technical shortcomings. Occasionally, a laterally located ureteral fistula can be cured by a permanent ureteral catheter. The question arises: Is the favorable influence of this method on certain cases due to any specific action of the fluid used, or, simply due to mechanic instances. The author is inclined to favor the latter explanation. Reasons: Pyelitis cases will rapidly improve, especially so far as the general condition of the patient is concerned, although only indifferent fluids were used for the flushing. Patients, carriers of ureteral stones, improve rapidly and stay in this improved condition for a long time, although the repeated flushing of the ureter with the different fluids didn't dislodge the stone or the calculi at all. The author tries to explain these facts by the following theory: In an inflamed renal pelvis, or around an impacted ureteral calculus, pus and debris will be precipitated and accumulated. Decomposition in these masses will lead to the formation of toxins and subsequent absorption of those into the system. Hence, the appearance of certain symptoms which will disappear after repeated flushing has removed these infectious deposits. Decomposition, absorption, and reappearance of the symptoms will recur if newly formed deposits are again precipitated.

Although the author expects improvements and more numerous and more satisfactory results from these methods, he wants to caution against any overflow of enthusiasm and against reports which are more enthusiastic than apt to stand for a rigorous criticism.

L. E. Schmidt: I have a case to report belonging to the same class as that reported by Dr. Kolischer. A man, aged 36, came to me

about a year ago with typical symptoms of renal colic, a condition that he said had existed for sometime. He had had chills and fever and had lost in weight. On account of his condition and the severe pain I was unable to make a local examination. So I had him skiagraphed and the skiagram showed three stones in the ureter. With a little attention the patient got on so well that I cystoscoped him and was able to pass a catheter into the renal pelvis. Through this I injected vaseline oil and this caused the urine to remove some of the obstruction from the ureter. I did this about half a dozen times in the course of four or five weeks. The patient recovered to such an extent that within two months he was able to resume his work. The patient refused any other treatment. He was skiagraphed at intervals and the stones were always found in the same position as before, although the symptoms all disappeared. The urine is clear; the patient has gained in weight and apparently is as well as ever.

A. D. Bevan: I am very much interested in the paper and I would like to ask a few questions. I have not had any experience with the treatment mentioned by Dr. Kolischer, but I am interested in the surgery of the ureter from several standpoints. I would like to ask him whether he has noticed anything in the way of a chill and fever like the urethral chill and fever which may be produced by the passage of an instrument in the ureter. I have noted this in one case in which I passed an instrument into the ureter from the kidney down so that I could in that case, exclude the possibility of its being a urethral chill.

I can see the possible benefits of this treatment. Dr. MacArthur presented a case of anuria before the Chicago Surgical Society in which it was proven later that the anuria was due to a blocking up of the single ureter (the other kidney had been removed) by crystals of cystin. In such a case it would seem possible that the obstruction could be removed in a mechanical way without subjecting the patient to an operation.

This subject is interesting also from the standpoint of stones in the ureter as mentioned both by the essayist and Dr. Schmidt. We do not hesitate to take stones out of the kidney, either from the pelvis or the calyces as the mortality is very small unless we have had an infected kidney. On the other hand an operation for removal of stone from the ureter especially low down is a very serious and often difficult piece of work and all surgeons who have done much renal surgery will be ready to admit the truth of that statement. There is an analogy between removal of stones from the ureter or kidney and the removal of stones from the common bile duct and the gall-bladder. Taking stones out of the gall-bladder is a simple matter, but removing stones from the common bile duct is a grave affair. If by some mechanical means, such as the catheter, and the injection of vaseline oil or some other agent, it would be possible in a certain proportion of the cases to dislodge and assist the passage of stone through the ureter, it would be a very important aid in this work.

I have been much interested in talking with

Dr. Leonard of Philadelphia on this point at a recent meeting of the New York Medical Society. He said that he found that of all the stones found in the kidney and the ureter by the x-ray about half were in the ureter and he noted the spontaneous passage of the stone in 16 cases where the diagnosis of stone in the ureter was made first by the x-ray. He presented this as a reason for temporizing in these cases with the hope that the stones would be passed rather than undertaking at once the serious operation of cutting through the ureter and removing the stone in that way.

Personally, I have used in these cases, as has been recommended by some, glycerin internally, and I would like to ask Dr. Kolischer his opinion as to its value. I have noted some favorable reports, and I suppose that in some way it acts like the vaseline oil. I can see in this mechanical treatment a great possibility of doing good in the treatment of ureteral calculi.

Dr. Kolischer (closing the discussion): There is no doubt that the ureteral chill exists. It first was mentioned by French surgeons. I, myself, have seen two cases of decided ureteral chill following ureteral sounding and showing all the symptoms of urethral fever. In both cases, the total amount of urine and the total amount of solids voided in 24 hours was reduced for some time previous to the soundings. This feature can be quite regularly observed in cases of urethral chill. Evidently, the organism is not in a position to eliminate quickly infectious matter forced into the system by sounding.

There undoubtedly exists a quite intimate connection between the nerve supply of the ureters and the pulse rate. It is a well known fact that if for instance we dissect the ureters to any extent out of their surrounding tissue, the pulse rate will always go up, although there is no fever. **Stoeckel** reports that he and his chief, **Fritsch**, always became frightened in their first experiences in ureteral surgery because of this going up of the pulse rate.

That reflectoric anuria due to impaction of a calculus can be cured by this mechanic treatment is a matter of record. My first case was a very obese woman. She was seized suddenly with a violent attack that by some surgeons was considered a ureteral colic, and by others an intestinal obstruction. In order to make a differential diagnosis, I sounded the ureters and distinctly felt a stone in one of them. I now injected vaseline oil and inside of half an hour the patient passed a stone of the size of a pea into the bladder. **Housman** reports a somewhat similar case. His patient was suffering from a complete reflectoric anuria for 36 hours. He passed a catheter into the ureter, injected vaseline oil, and in a very short time, a ureteral stone dropped into the bladder and the patient was saved.

So far as the loosening of calculi and their locomotion in the ureters is concerned, I think **Dr. Bevan** called attention to a very important problem. You will find, for instance, in post mortems a ureteral stone way down in the ureter, while its former seat can still be distinctly made out high up. Another case I remember gives a very striking illustration of the possibilities of the emigration of ureteral stones.

Some four years ago, I catheterized a ureter for a genito-urinary man here in town. The catheter struck a very slight obstruction about four or five inches above the bladder. The withdrawing of the catheter was followed by the dropping of a pus plug out of the ureter. A few hours after the interference the patient was seized with a moderate ureteral colic and 24 hours afterwards he was surprised by a calculus dropping into the vessel used, which calculus was passed without any discomfort. The stone was about three-quarters of an inch in length, and about four m.m. thick. The surface was so rough and ragged that no one would have expected such a stone to pass through the ureter or through the urethra.

As to the use of glycerin, **Dr. Bevan** alluded to, I have had no personal experience with it, but I know this that a great many of the physicians in Carlsbad administer glycerin in such cases and claim good results. There is only one objection to the use of glycerin, and that is an idiosyncrasy on the part of some individual cases, in whom there follows slight disintegration of the blood and hematuria. I, however, do not know of any fatalities following the use of glycerin.

In closing, I wish to mention one more point. Ureteral catheterization and all endovesical operations are still considered by a number of professional men as being either a fake, or a mystery, reserved for a few select ones. It is neither one nor the other. I am sure that all these interferences are more a matter of good instruments and proper methods than of special ability, and I am convinced that this kind of work will, in time, become just as popular as any other method of examination and treatment, tending to give a direct view of the cavities of the human body. At the same time, I should like to caution against genuine or affected over-enthusiasm, as it will be the source of much disappointment and it will tend to discourage the good work of the conscientious men.

Drs. Le Count and Dunn demonstrated two pathologic specimens:

- (a) Carcinoma of head of Pancreas.
- (b) Carcinoma of liver with obstruction of Portal Vein causing ascites.

The report concerning these specimens has not been received.

Discussion of Dr. Dunn's Report.

A. J. Ochsner: The clinical aspects of the first case present some interesting features. There was an obstruction of the duodenum near the entrance of the common duct causing an accumulation of fluids in the stomach, and such an accumulation is very likely to cause dilatation and ulcers of the upper portion of the duodenum. The hemorrhages which occur in these cases are likely to be attributed to carcinoma or ulcer of the stomach, when as a matter of fact the stomach is not involved.

With regard to the treatment of these cases: I believe that the history of this case shows the condition in which these patients are usually found when they are treated by internal remedies. If these cases are given systematic gastric lavage with normal salt solution two or three hours after each meal, the patient is much more comfortable. Of course, the danger from

lavage is in the production of hemorrhage, which really would be a fortunate accident because it would relieve the patient from his suffering.

If this mucus and blood and undigested food are allowed to remain in the stomach they must either be evacuated by vomiting or undergo decomposition, which is surely not the best thing for these cases.

Early Massage and Movements in the Treatment of Fractures and Sprains.

Daniel N. Eisendrath. My chief object in bringing the subject of the treatment of fractures before the members of this Society is to urge the use of more radical methods. The former routine of immobilizing all fractures and the adjacent joints for a period of 4 to 6 weeks must, I feel, be subject to slight modification in the light of recent experience and it shall be the aim of this paper to show what these changes are. When we are called to a case of a fracture, it should be one's first duty after its reduction to consider, how can I best aid the patient in recovering the usefulness of his or her limb? Can we shorten the long convalescence with its resultant loss of valuable time and earning capacity. How can we most rapidly restore to the limb its normal joint functions and prevent an atrophy of muscles and an ankylosis which will require many months to overcome.

The methods which I am about to describe are not applicable to every variety of fracture. I would also caution you at this time not to employ them in their more radical form wherever there is a great tendency to displacement of the fragments until union is quite firm.

The use of massage and of active and passive movements in the treatment of fractures and of severe sprains has been gradually gaining in the number of its advocates through the writings of Lucas-Championniere of Paris. We owe him a great debt for calling the attention of the profession to the employment of these methods in order to prevent atrophy and ankylosis as well as to promote healing.

Before taking up my subject in detail permit me to recall a few salient points in the surgical pathology of fractures. Soon after the injury the blood clot around and between the ends of the fragments is absorbed and replaced by a jelly like mass of young connective tissue cells called the callus. It corresponds to the solder which the plumber places over the ends of two pipes he desires to join. Bone begins to form at the periphery of the callus about the tenth day and advances toward the center rapidly, forming a ring of bone around the ends of the fragments so that by the end of the third week there is but slight abnormal motion at the point of fracture (exception to this is the femur.) This entirely disappears by the end of the fourth week, especially in young people, and the union is firm. In the case of the femur it requires six to eight weeks. The greater the displacement of the ends of the fragments, the larger the callus and slower the healing of the fracture.

During these changes (callus formation) the muscles which supply the immobilized joints

atrophy and the circulation in the skin and neighboring tissues is sluggish, resulting in swelling, etc., of the limb. The enforced rest causes more or less fluid to accumulate in the tendon sheaths and joints. This becomes organized and results in fibrous ankylosis of the joints and great impediment to the free action of the tendons within their sheaths. It is this atrophy, fibrous ankylosis and teno-vaginitis which interferes with the restoration of the normal functions of the limb. Can we decrease the amount of wasting of muscles and control the stiffness of joints and tendons after fractures?

It is the belief of the writer, based on a large experience, that the earlier use of massage, active and passive motions, will to a great extent eliminate the above conditions, which retard convalescence and in some cases cause permanent disability.

Massage of an injured limb increases the amount of blood supplied to it, promotes the absorption of the swelling and prevents atrophy of muscles. In the case of a joint injury the exudate rapidly disappears and the articular surfaces can be again approximated so that movement is facilitated. By the cautious use of active and passive movements, either with or without the aid of apparatus, the normal function of a joint can be rapidly restored.

How and when should these methods be applied?

Before proceeding to answer these questions, let me state that in the larger cities it would be best to secure the services of a masseur or masseuse, many of whom you will find have had special training in massage as applied to surgical cases. Wherever possible I have left the daily treatment of these cases to such professional masseurs and simply supervised them from time to time. When it is impossible to have such aid the physician can carry out the treatment himself if he will remember that the massage method to be preferred is that of rubbing the limb principally with the thumb and finger tips of one or both hands toward the axilla in the arm and in the lower extremity toward the groin. This will facilitate the absorption of the exudate by the lymphatics, because one massages in the direction of the lymph current, viz., centripetally. Vigorous kneading or slapping of the limb is to be avoided. One can accomplish more by gentle but firm kneading, attempting to follow the outlines of muscles and tendons as far as possible, and rubbing over the joints at places where their capsules are most exposed.

In an ordinary case of fracture or sprain the previous use of hot applications for 5 to 10 minutes will render the massage less painful. The rubbings at first should be very light and only last three to five minutes. Later on they can be a little more vigorous and the sitting can be lengthened to twenty minutes daily.

The active and passive movements of the limbs can be carried out immediately after the massage, but should only be permitted for a period of five minutes at first and the time then gradually increased. When a severe sprain, say of the elbow or ankle is first massaged, the pain seems to be almost un-

bearable, but this discomfort as well as the swelling rapidly disappears and it is surprising to those who have never applied this treatment how quickly the normal function of the joint re-appears. The same applies to the synovitis which accompanies fractures in close proximity to, or even into joints.

I believe that the suggestions which I make will be best understood by referring briefly to each of the principal varieties of fractures of the long bones and citing some typical cases which I have had occasion to treat.

Fractures of the Upper End and Shaft of the Humerus.

After reduction a V-shaped splint is placed in the axilla and the arm supported by a moulded plaster-of-Paris splint, extending from the shoulder to the wrist, the elbow being flexed. This is secured to the body by muslin bandages. The entire hand is left free. The fracture should be redressed once a week for three weeks, and the position corrected, if necessary. At each of these changes the entire arm should be lightly massaged, and after the second week gentle passive motions of the shoulder and elbow joints can be made while the fracture is supported. Beginning with the fourth week the splint should be removed every day and the arm massaged for two minutes. After the fourth week the union is usually firm and the splint can then be removed. The arm may now be more vigorously rubbed and passive movements begun. At the same time the patient should be encouraged to use some apparatus to exercise the muscles. This can be con-

structed by inserting a pulley into the upper portion of a door-frame and passing through it an ordinary clothes line, to which a bag of salt is attached. This bag should at first hold one-half pound in children and two pounds in adults. The quantity can be gradually increased to three and six pounds respectively. The patient is instructed (by the aid of a handle) to pull upon the short end of the rope, as one would use a Whiteley exerciser. Almost unconsciously the patient will increase his range of motion, and within two weeks, even in old people, an ankylosis is prevented. This apparatus is used from one minute twice daily at the beginning to five minutes twice daily later on. I can warmly recommend this simple and cheap apparatus for use not only after fractures close to the shoulder joint, but also after the third week in dislocations at that joint. In the case of sprains of the shoulder I would recommend its use within the first few days after the injury.

Fractures Into and Around the Elbow Joint.

In the case of fractures of the olecranon process, the use of massage is of the greatest value from the first week on, in order to reduce the amount of swelling and permit of closer approximation of the fragments. This fracture should always be treated with the arm in the extended position. Passive motion should not be begun until after the fourth week.

In fractures of the lower end of the humerus, opinions differ as to the method of treatment. Some favor placing the arm in an extended,

many others prefer either flexing the elbow to a right or even an acute angle. Personally, I almost invariably use the former position (right angle). In both adults and children the writer prefers the use of plaster of paris splints which are removed once a week, and the arm gently massaged, especial attention being given to the elbow. Active and passive movements should not, however, be begun until the union is quite firm, i.e., fourth to sixth week. They should be very gentle and always combined with massage. After the fourth week the patient may be advised to use a pulley weight apparatus, easily prepared. This is a modification of the one used for the shoulder. In addition to the pulley in the top of the door-frame, one is screwed into the base, and the patient instructed to make flexion and extension movements by pulling upon that end of the rope which leads to the ground pulley. The writer has employed this little apparatus with very satisfactory results, especially in children, in whom it is so difficult to carry out passive movements. After dislocation of the elbow, the patient is instructed to begin the use of this apparatus during the fourth week, increasing the length of time it is used and the weight daily. In sprains of the elbow the use of massage, passive motions and the use of such pulley weights is to begin early (second to fourth day.)

Fractures of One or Both Bones of Forearms.

Massage and passive motion should not be employed until after the union is firm, which is usually about the fourth week. The splints should not immobilize the elbow, and only extend to the middle of the hand below.

Colles' Fracture.

Championniere does not use any splints for this variety of fracture, and begins massage as early as the third day. It is best, however, to use anterior and posterior wooden, metal or plaster splints, extending only to the middle of the hand, so as to permit of free movement of the metacarpo-phalangeal joints during the entire treatment. The patient should be encouraged to make active movements of the fingers frequently during the day from the second day on. The splints should be re-adjusted once a week, and light massage of the forearm given with the arm resting upon a pillow. When union is firm (end of fourth week), the massage can be given more vigorously, so that within a short time all of the swelling disappears. At the same time, active and passive movements of the wrist joint and of the forearm can be begun, but the arm should be kept in a sling, until the end of the fifth week. By this method of treatment the normal functions may be completely restored by the end of the sixth week.

Fractures of the Patella.

No method of treatment will give as satisfactory an anatomical and functional result as massage employed in this variety of fracture. Begun within forty-eight hours after the injury, the hemorrhagic effusion into the joint rapidly disappears, and the fragments can be much more closely approximated. At the same time, light massage of the thigh will prevent the

accompanying extensive atrophy of the quadriceps. Passive and active movements should be begun at the end of the sixth week, very gently at first. In the X-ray photograph shown the patella was sutured with kangaroo tendon by the writer immediately after the injury, but massage and passive movements only begun after the sixth week. The functional and anatomical results are perfect.

Fractures of the Upper End of the Tibia and Fibula.

In these cases even when the fracture of the tibia does not extend into the knee joint, as in case 1, the amount of effusion is almost as great as when the line of fracture passes through the articular cartilage, as in case 2. When there is little tendency to displacement and especially when only the upper end of the fibula, the limb should be placed upon a posterior moulded plaster splint, so that the knee joint may be massaged early without disturbing the position. If the treatment is begun during the first week (as was done in both of the cases from which the X-ray pictures of cases 5 and 6 were taken), the exudate disappears very rapidly, so that light passive movements may be begun during the third week. The results under this method are far more rapid restoration of the function of the knee joint, and no disturbance in the healing of the fracture. If the latter is accompanied by tearing of the lateral ligaments or of the semilunar cartilages, the movements should not be begun before the fifth to sixth week.

In moderate or severe sprains of the knee joint, the writer begins massage and passive exercises during the first week.

Fractures of One or Both Bones of the Leg.

If both tibia and fibula are broken, a circular cast should be applied in the classical manner from the toes to the middle of the thigh, for the first four weeks. At the end of this time a removable cast is used, so that for the next two weeks the leg may be taken out of the splint daily and massaged. At the same sitting the knee and ankle joints should be massaged and light passive movements made. During the sixth week the patient should step upon the limb, and begin active movements of both of the above joints. If this treatment is faithfully carried out, the patient will be able to go to work at the end of six to seven weeks, instead of being incapacitated through edema of the limb and stiffness of the ankle and knee joints for three to four months. If the fibula alone is broken close to its lower end, the author seldom uses any splint, but begins massage almost immediately, as in a simple sprain of the ankle, and the patient is allowed to place some weight upon the limb.

The contra-indications to the use of early massage in fractures or sprains are the following:

1. Tendency to displacement of fragments in oblique fractures. Under such conditions it is best not to begin either massage or move-

ments until the union is firm (fourth to fifth week.)

2. In compound fractures until the wound is healed.

3. Wherever the condition of the skin is such as to permit of infection; for example, the presence of blebs, or extensive abrasions.

4. The presence of fragments which project but do not penetrate the skin.

Fracture of Surgical Neck of Humerus.

Case 1; H. L., aged 12, fell from bicycle, sustaining above fracture. Reduction followed by application of cast binding arm to chest, with pad in axilla. Cast removed on twenty-eighth day, union firm, massage and movements begun. Advised use of pulley as shown before described. Noted rapid disappearance of atrophy of deltoid and increase in range of motion of the shoulder joint. At the end of six weeks, conditions practically normal. Patient greatly interested in use of pulley, believing it to be similar to gymnasium work.

Dislocation of Shoulder.

Case 2. S. Z., aged 22, arm placed in sling after reduction by Kocher method. Massage of deltoid begun upon following day and continued daily. During third week arm more vigorously rubbed and light passive movements (abduction and adduction) begun. These were increased during fourth week and when sling was discontinued at end of fourth week, began use of active motion with pulley weight apparatus as described. Deltoid was of normal size and strength at end of five weeks. Normal range of motion at end of six weeks.

Fracture Through Lower Epiphysis of Humerus In Child of Three Years.

Case 2. The extent of this injury is shown by the X-ray picture. After reduction, arm placed in rectangular anterior and posterior plaster splints which were removed once a week, and re-adjusted. During the fourth week union firm, and began slight massage and passive movements. Advised use of double pulley apparatus, before described. Although child would scream at least attempt to employ passive movements, would gladly use apparatus, and a rapid restoration in function of the elbow joint was observed.

Fracture of Olecranon.

Case 3. Gentleman, 48, years of age, fell from chair, striking back of elbow and sustaining simple fracture of olecranon. Seen one hour after injury, and was only able to make diagnosis with aid of X-ray, owing to great swelling. Treated in extension, but did not begin massage until end of fourth week. At this time still considerable swelling and inability to flex elbow. After two weeks of daily treatment lasting 5 to 15 minutes, during which massage and passive movements given, he was able to flex elbow normally, and swelling had entirely disappeared. In future, I shall apply an anterior moulded plaster splint from which arm can be removed daily and begin massage during the first week. The anatomical and

functional results in the above case have, however, been highly satisfactory.

Colles' Fracture.

Case 4. R. G., aged 46, sustained typical fracture of radius, one inch above articular surface, with marked displacement and sprain of wrist. Reduction under anesthesia (which the writer regards as one of the most important steps in the treatment) and application of palmar splint of metal from bend of elbow to middle of palm of hand, so as to permit of free flexion and extension movements in all of the metacarpophalangeal joints. Short, dorsal (cardboard) splint reaching to middle of back of hand. Redressed once a week and five minutes massage given while hand rested on a pillow. By end of third week treatment given daily, swelling gone by end of fourth week; began light passive motion of wrist and pronation and supination during fourth week. Arm kept in sling during fifth week and massaged daily. Able to resume active business at end of five weeks.

Fracture of Patella.

Case 5. Male, aged 40, fell backward and down flight of steps, sustaining oblique fracture of right patella with considerable separation of fragments and great swelling of knee. Taken to County Hospital and periosteum of patella sutured with kangaroo tendon by the writer, twenty-four hours after injury. Limb placed in cast for six weeks. Primary union of wound. X-ray taken at this time showed ideal union. When the cast was taken off, considerable swelling of entire limb and marked atrophy of thigh muscles. Patient was instructed how to apply massage and encouraged to make active motions of knee joint. At same time took treatment every other week from masseur. At end of ten weeks swelling entirely gone, able to stand on limb without support, and to extend and flex knee in normal degree. I believe that in future I will, wherever possible, place the limb on a moulded posterior plaster splint, and begin massage immediately after the accident, giving especial attention to the knee exudate, and to the rapidly increasing atrophy of the thigh muscles, which latter greatly retards convalescence. I will, however, not begin (as in this case) passive or active movements before the end of the sixth week.

Sprain of the Knee Joint.

L. F., aged 19, injured at game of football; left knee enormously swollen and tender. Advised hot applications and placed limb on posterior, well-padded wooden splint. Began light massage on third day after the injury. This was gradually increased in length of time of application and vigor. Exudate in joint greatly decreased within three days, and not to be detected at end of tenth day after accident. Patient advised to use limb and passive movements begun at end of first week. At end of two weeks able to walk about without limping, and to move joint normally. He has been under observation for two years, with no recurrence of the synovitis.

Fracture of Head of Fibula and Outer Tuberosity of the Tibia Into Knee Joint, Accompanied by a Severe Degree of Synovitis.

A gentleman of 50 fell from a car, causing above fractures, and also extensive laceration of the internal lateral ligament. Limb placed in plaster cast which was removed on the tenth day. From this time on, Bavarian splint used, so limb could be taken out every day. From eleventh day on had masseur give daily massage of knee, which was greatly swollen and tender. The swelling disappeared rapidly under the influence of the massage, but a tendency to its recurrence was observed when patient began to get up and walk during the fourth week. A continuation of the massage caused this to disappear permanently. When the circular plaster cast was removed upon the tenth day, a marked atrophy of the thigh and leg muscles was observed. After the massage had been given for a week, the volume of the limb was seen to increase and the muscles felt quite firm again. Passive movements were begun during the third week, and gradually increased until limb could be fully flexed by end of fourth week. The abnormal lateral mobility caused by the laceration of the internal lateral ligament decreased markedly, and was almost absent at the end of six weeks, at which time the patient walked about for hours, and with only the use of a cane. A reference to picture will show that the line of fracture of the tibia passed directly into the knee joint. Attention is called to the fact that at the end of six weeks the patient was actively engaged in the pursuit of his profession as a physician.

Fracture of the Head of the Fibula and Fissured Fracture of the Tibia, Accompanied by Extensive Effusion Into the Knee Joint.

Male, aged 56, had above fractures with marked swelling of the knee joint. Upon admission to the Cook County Hospital he was placed in a wooden, well-padded fracture box, and an ice-bag applied over knee joint. At the end of ten days in the absence of a masseur the patient was advised to rub the knee himself, and to begin active movements. The danger of ankylosis at his age was explained to him, and he carried out the treatment himself very conscientiously. At the end of the third week the swelling had entirely disappeared, and he could flex the knee to a right angle. By the end of four weeks he was walking about with the aid of crutches and able to return to work a short time after.

Fracture of the Tibia and Fibula Just Above the Malleoli.

Simple fracture of both bones of left leg, with severe sprain of ankle of same side. Blanket splint for ten days, followed by circular plaster cast which was removed at end of fourth week. Leg, especially ankle, massaged daily for five minutes, and light passive movements of ankle and knee begun. Able to walk on limb and bend both of latter joints fully by end of sixth week.

Severe Sprain of Ankle.

Young lady, aged 24, fell on sidewalk, sus-

taining severe sprain of ankle, with great swelling, pain, discoloration, etc. Limb placed in blanket splint for two days, and ice-bag applied. Gentle massage begun on third day after which swelling disappeared rapidly. Patient encouraged during first week to step upon injured foot, gradually increasing amount of weight placed upon it. At end of two weeks all swelling gone, able to walk without support. Discharged at end of three weeks as recovered. I have adopted this treatment by massage as the normal method in sprain of the ankle. It is quite painful at first, but causes a rapid disappearance of the swelling, and inability to move ankle joint.

My conclusions are:

1. Massage, active and passive motions prevent the atrophy of muscles, tenovaginitis and ankylosis so frequently accompanying and following fractures, especially those close to the shoulder, elbow, wrist, knee and ankle joints.

2. They give far better results than complete immobilization in the majority of fractures.

Discussion of Dr. Eisendrath's paper.

A. W. Baer: This subject means a great deal to those people who are suffering from a fracture or a sprain. Everything in the line of treatment has been mentioned except electricity. I do not know of any form of massage that can go through a splint better than a static spark, or continuous current, although it is quite painful for the first two or three treatments.

F. Henrotin: About eleven years ago I visited Europe for the express purpose of consulting the man who was supposed to be more or less of a charlatan, concerning a semichronic condition of the knee-joint of a near relative. The patient being ill one day he treated her in my presence, something he had not done for a long time, and after seeing this twice I recognized some of the points involved. Since that time I have never put a restraining apparatus of any kind, nor have I used any lotions on any sprain, no matter how severe. I think that several members of this Society who have heard me speak on this matter have taken the method up. It has taken many years to bring this subject before the profession. It is a method that is absolutely effective as regards sprains and some forms of fractures. I have treated several hundred such cases with the greatest success.

In treating an inflamed joint it is improper to use a restraining apparatus of any kind. I consider that the plaster cast is the bane of all inflamed joints unless there is a specific form of infection, a traumatic condition. The treatment is followed by the very happiest results from the very first treatment until the patient is well. We all know that according to the old dictum all inflamed joints, especially traumatic joints, should be put at rest. Dr. Moses Gunn used to throw up his hands and ask us not to forget that rest is the principle involved. Today I say most emphatically that an inflamed joint should never be put at rest. I have never told a patient that he should not move his joint, or that he should remain in bed for a certain time, or that he should keep his foot quiet, feeling

that he would know enough not to move his foot so much that it would pain him. He is a pretty good judge as to how much quiet or movement his foot will stand without causing pain.

The treatment, as near as I can judge, consists in simply a quick manipulation of the edges of the synovial membrane of the affected joint. There is an effusion in the synovial sac and it is wonderful how quickly swelling, effusion and pain subside after such treatment. It curtails the duration of the trouble very much. The same applies to fractures in the vicinity of the joints. I have now treated four cases of Colles fracture without the use of any apparatus. I have not tried to do this in all cases because I was afraid of public opinion. It is dangerous practice to treat a fracture in an entirely different way from that in vogue for centuries, because you might have some trouble and you are laying yourself liable to criticism. But it is surprising how well these fractures will do by replacement and manipulation. It is infinitely better than to put on a restraining apparatus. There is no edema of the surrounding tissues; no hyperplasia of the muscles; the joint is supple, not stiff; it is remarkable how simple those cases become. In the fracture of the tibia where the fibula is not involved, and in the treatment of all fractures this rubbing and manipulation of the muscular parts and rubbing over the site of the fracture with reasonable tenderness is effective. Of course, you watch for any displacement of the fragments.

I treated two fractures of the clavicle in the same way without any bandage whatsoever. I have always had such pleasant results from the treatment of fractures and sprains by manipulation and the free application of the thumb at the right place, that I have a very good opinion of this method. The treatment should last not more than half a minute, a quick impinging upon the protruding surface of the swollen synovial membrane and then letting the patient rest. A little the first day; a little more the second day, and it is remarkable how those swellings disappear and how well the injuries do.

Fenton B. Turck: Dr. Henrotin was my chief when I was an interne in the Alexian Brothers Hospital and I remember distinctly my instructions about giving massage. As I had previously taken courses in massage it was an easy matter for me to carry out these instructions. But I felt the necessity of greater knowledge as to the physiology of massage. We must know the physiology of certain movements in order to be able to apply them skillfully and to get their physiologic effects. The combined knowledge of the surgeon and the masseur is necessary. I do not know where such a knowledge can be gained at the present time, except that it is taught in medical schools. The application of heat in such cases as were mentioned requires a thorough knowledge of the uses and action of heat and of its physiologic effects. Mechanical therapeutics and physical therapeutics are two very important adjuvants in the treatment of disease and we should know more about them. The essayist represents the more advanced surgeon; a higher class of student in surgery, and this ought to be a lesson to the older men. They should listen to

the younger men and see which way modern surgery is trending. The greater part of the surgery in these cases is really medical. After the mechanical apposition of the fragments a medical knowledge is required to complete the cure.

John Kercher: Douglas Graham, in his book published in 1893, collected 700 cases in which he showed that they got well in one-third the usual time by the application of various manipulations, such as massage and Swedish movements. I can speak more of sprains than fractures because my practice is not a surgical practice and I have not found many surgeons who are willing to permit an outsider to treat fractures for them. I can personally attest that the treatment by massage followed by light movements has cut short the case to such an extent that I would not think of using a plaster cast in any uncomplicated sprain. I believe that the trouble with a vast number of the so-called masseurs and Swedish movement operators is that they are altogether too strenuous. As, Dr. Eisendrath stated the first massage treatment is almost invariably attended by pain. That shows inexperience. There is a tendency for these manipulators to treat every case alike. He says that the first manipulation should last about two minutes. I think that is not long enough; I should say ten to twenty minutes but instead of getting strenuous and trying to reach the deeper tissues, I would let these strictly alone. I always give first light superficial manipulation with the object of stimulating the superficial circulation. In this way you also gain the confidence of the patient. Then, using good judgment, which depends on experience, you gradually work down deeper and deeper, finally dispelling the inflammation and hemorrhage.

The massage should be combined with light movements depending on the joint involved.

Dr. Hosmer spoke of using moist heat when there is any pain. Although there is no special objection to the use of moist heat, yet I have been in the habit of using dry heat in the form of the Betz apparatus. In such cases where the patient cannot come to your office and where the apparatus cannot be transported to the patient's home it may be better to use hot water. The heat stimulates circulation and that is what we want to do. I have used in connection with massage and Swedish movements the Betz apparatus.

In my last case of a very severe sprain of the ankle I gave only eight or nine treatments, which was all that was necessary. The joint was very much swollen and painful. The first treatment was a baking in the Betz apparatus to dispel the pain and effusion. After that I used a little light massage for five minutes. I increased the massage gradually and after the second or third treatment I omitted the baking entirely.

A. B. Hosmer: The treatment of fractures and sprains is a matter of such great practical importance, not only to the orthopedic and the general surgeon, but likewise to the general practitioner of medicine, in whose hands it so commonly rests, that I feel sure the paper we have just been privileged to hear would have

proven of great interest to this Society even had it been presented by a less eminent and experienced member of our profession. The essayist is to be congratulated upon the rapid and successful results he reports in his list of cases, yet I cannot help feeling he is somewhat indebted to "luck", of unusually good quality, in the case of fracture of the olecranon (provided there was a fracture with distinct diastasis), which he treated without suturing. The doctor, of course, claims no originality or priority in the methods of treatment advocated, excepting in his ingenious use of salt therein. Salt is fortunately inexpensive. There is a large demand for it in the digestion and assimilation of facts and figures, as well as of foods, and it is widely used as a preservative. Let us hope it will in this instance demonstrate its usefulness in the latter role. But, speaking seriously again, I can see no advantage in his apparatus over the ordinary pulley weights or Whiteley (elastic) exerciser, and believe that for the moral or mental effect, and as an inciter to interest and enthusiasm in the prescribed exercises, the more elaborate and perhaps expensive the apparatus the better. It is to be regretted he did not mention as of value in limbering up the various joints the use—for the **shoulder**, of the trapeze (home-made or purchased), and the punching-bag;—for the **elbow**, of the above and trundling a wheelbarrow;—and for the **knee**, of the bicycle—all of which I have repeatedly used with advantage.

A radiogram before and after reduction of the fracture, and again after discontinuance of treatment would have added interest to his report of cases.

In the treatment of sprains (so-called), I am an advocate of, and have for over eleven years past practiced in every case coming to me (whether the condition of the joint was acute, subacute or chronic, primary injury or relapse, after partial recovery), a far more radical method of treatment than the doctor advocates. I use no retentive apparatus of any kind—splint, bandage or plaster strapping—massage and movements *in loco*, and, if needed, of the whole limb, and order and encourage the freest functional use of the joint possible to the patient from the very start. To relieve pain at times, I prescribe moist heat. This method I am convinced by my clinical experience and by experimentation upon animals with macroscopical and microscopical post-mortem investigation by Dr. Wm. A. Evans, of the Columbus Medical Laboratories, is the quickest and surest way to complete restoration of joint function in all cases of sprain where there is no infection present, and no complete rupture of ligament or tendon. In the presence of any form of infection, either simply complete rest of the parts or an operation with subsequent rest is imperative, and with any of the other mentioned complications a greater or less modification of the method is called for. In the treatment of fracture I am, as to certain ones, more radical, and as to others, less so, than the essayist. I believe all fractures of the patella and olecranon should be sutured at once, and no chances taken of obtaining merely fibrous union through interposition of soft tis-

sues. Again, the same in all multiple oblique fractures of any long bone, and many badly comminuted simple fractures, in most oblique fractures of the femur, especially where the soft tissues have been much lacerated, and in fractures of the femoral neck, except in very elderly individuals. Again, in many fractures of both bones in the middle third of the leg, and of both bones of the forearm, and in fractures with separation of the tibial tubercle. Likewise, in all vertebral fractures in which the cord is not already too badly injured. In a few words, in all cases where reduction of the fragments and their maintenance in good apposition is not assured and proven by X-ray through the dressing, it is better to subject the patient to the rather slight risk of an early and usually easy operation, than to the great likelihood of a prolonged disability first, followed by a far more serious and difficult operation for non- or mal-union.

Now, a word as to the surgical pathology of these cases. There is no doubt in my mind that massage and passive and active movements of the limb, by improving the circulation and preventing the formation of adhesions, favor more rapid repair and complete restoration of normal function, but that simply keeping a joint, which has not been subjected to direct or indirect violence, and is not the seat of an infection, at absolute rest, even for many months, ever results in ankylosis or stiffening from a tendovaginitis, I do not believe. I have treated too many cases of hip disease where I have kept the knee also fully extended and absolutely at rest in the brace without any such result. If you keep a sound joint flexed protractedly, you will have a contracture of the flexor group, and at the knee a subluxation of the head of the tibia, but if the same joint is kept fully extended, nothing happens except temporary atrophy of the muscles controlling it. On the other hand, to revert to the process of repair,

more closely coapted and free from friction, just each other bone fragments are held, smaller the formation of callus, and finally a new bone. Therefore, wherever enlargement of a bone will result in unsightly deformity or interfere with muscular action or joint movement, or where a fracture with mobile fragments extends into a joint, and there is liability to an exostosis extending into and thus interfering with full action of the same, it is far wiser after securing perfect reduction of fragments to forego the benefits of massage, etc., than to take the risk of increasing the callus formation thereby. In specific cases there is always danger of having deficient callus formation, therefore massage of quite decided character is always indicated.

Contrary to the doctor's suggestion, I always prefer to do the massaging and manipulation of a sprained joint, and of the seat of a fracture myself, leaving the general massage of the limb to a masseur. In the case of a fracture I do not want him to fool with it, and with the joint he would not be sufficiently brutal.

I cannot approve of the V-shaped pad in fracture of the upper end of the humerus; it often excoriates the skin and compresses unduly the vessels. In fracture, with or without dis-

location, at the elbow, I am satisfied reduction can be much more accurately maintained in the fully extended position, and since, when once secured (i. e., the reduction), the parts should be left absolutely undisturbed for from four to five weeks to guard against exostosis, the subsequent remobilizing of the joint will be a far easier matter than in cases dressed at a right angle. The contraction of the flexors and of the structures in the bend of the elbow resulting from the latter position are usually slow in yielding, and in the former the patient will accomplish the whole thing himself, even without apparatus.

Fractures at the lower end of the radius with separation of fragments I prefer to dress with plaster-of-Paris, placing the parts in pronation, or in slight supination, according as the obliquity of the line of fracture is from backward forward or vice versa. In firmly impacted fractures or fissures of any bone, I use no dressings, and manipulate from the start.

I can offer no criticism of the essayist's list of contraindications to the methods he advocates.

H. N. Moyer: In 1896, I sustained a very severe concussion followed by synovitis of the right knee. My first surgeon was Dr. M. H. Richardson, of Boston, who told me to stay in bed for a few days and then get about with a flannel bandage on. A few weeks later I came to Chicago and consulted five of our most prominent surgeons; in fact, I asked everybody I met for advice concerning my chronic synovitis. I was almost helpless; I could go to my office and that was about all. None of my surgical friends agreed as to the line of treatment. One said I ought to go to bed and have the joint drained. Another would put it in a cast, another thought I would get well in about a year or two if I would just keep quiet. One man, in whom I have great confidence and who has had a very wide experience, said: "Your knee will never get well. It will always bother you." It was disheartening.

I saw Dr. Henrotin and he sent me to Dr. Hosmer, who officed in the same building with me. He found a chronic synovitis with an exudate. There were adhesions in the joint; the range of motion was very limited, about 20 per cent of normal motion. In two weeks, under daily manipulations of a minute or two, there was absorption of the fluid in the joint, and by passive movements full motion was restored to the joint. The joint was perfectly well in two weeks and it has been so ever since.

Alex. Hugh Ferguson: I do not think that this discussion should be allowed to go as it at present stands. It seems to me that the true treatment of fractures by immobilization with splints, etc., has been lost sight of by the extravagant eulogy of massage, passive motion, etc., to the soft parts. The discussion left the impression on me that a broken bone should not be immobilized with plaster of paris or a splint. The wisdom of the paper of Dr. Eisendrath lies in that it points out that passive movements should not be begun until bony union has taken place. I perfectly agree with him, and this should be emphasized. The time for immobilization should

tally with our knowledge of repair. Too firm and too long continued bandaging and fixation is not only deleterious to a speedy recovery of the limb, but sometimes destroys the soft structures almost altogether.

In children and growing persons, whose bones are broken, functional activity usually begins when the repair is complete, and then they want to use the limb whose bone was fractured.

Abertheng called this "animal consciousness." It must be remembered that in certain fractures not infrequently at the lower head of the radius the fracturing force has done the most damage to ligaments, tendons and sheaths of tendons. When this is judged to be the case, early passive motion is indicated to prevent adhesion of the tendons and sheaths to bony union.

I recollect some of the evils to bony union of too early active and passive motion. In one case, fracture of both bones of the fore-arm in a young man, the splints were removed at the end of three weeks, firm bony union was present, and he was advised to use it freely. Well, in three weeks more he returned and I found that the callus had become absorbed. Upon returning home he worked on the farm, and no doubt that too much use of his arm had caused the absorption of the callus.

Fix broken bones, but do not injure the soft parts. Occasionally examine the seat of fracture, but as a rule do not use passive motion till the bony union is fairly firm, which, however, differs in time in different bones, different fractures, and different persons.

Dr. Eisendrath (closing the discussion): If Dr. Ferguson will refer to my paper he will find that I said that oblique fractures are a contra-indication for this work, especially if there is any tendency to displacement. I take a conservative stand in regard to fractures within or near a joint. I do not begin passive motion until the second or third week. It cannot do any harm as it has nothing to do with the movements of the joint.

In fractures of the patella and olecranon I stated that I began massage almost within the first week, certainly during the second, but that I would not begin passive movements until the fracture had united firmly (at the end of six weeks.) The object of the massage is to overcome the effusion into the joint and also to aid in the approximation of the fragments and to overcome the atrophy of the muscles. I would not try to treat a Colles fracture without a splint, although I often begin the massage during the first week and light passive movements in the second week. I do not see how it is possible to tell when a tendon is ruptured subcutaneously and when it is not. I have not been able to do it. I never take any chances in Colles fracture in old or young; I encourage them to use their fingers all day, as if they were playing piano.

Dr. Kercher's statement as to the length of the first sitting was answered by Dr. Henrotin. It should not exceed a few minutes and the treatment should be mild. As to the hot air apparatus, I do not care whether it is named

after one maker or another. I believe in it no matter who makes it.

Dr. Hosmer said that he would like to see an X-ray taken after the case has been treated. I passed around one X-ray of a knee-joint which was taken five weeks after the injury, the X-ray of the patella was taken six weeks after the injury occurred. He said, too, that all cases of fracture of the olecranon and patella should be sutured. I think that is a radical step to take because many of these cases fall into the hands of men in small towns; men who have not the proper facilities for doing this work. I would not advise that except when I can get the case to go to a hospital where every possible aseptic precaution can be taken.

With regard to the physician carrying out the massage himself; I have not always been able to give the necessary time to do this. I have been able to get good masseurs. I have watched them to ascertain how long it would take to give a treatment and found that nearly it required about three quarters of an hour or an hour. But few physicians devote that much time to it.

In regard to the "V"-shaped pad, I might have been misunderstood. I first saw this described in Scudder's book on fractures. Take two pieces of cardboard large enough so that when you fold them they will reach from the axilla to the internal condyle. Put several layers of sheet wadding between them and over this a few layers of cheese cloth thus making a perfect triangle which fills out the hollow under the arm and prevents the bone from being displaced as would be the case if the arm is brought close to the chest. The pad does not excoriate.

A short time ago I read the article published by Championnière in 1886 and also a later clinical lecture in which he says that he treats all his cases of Colles' fracture without a splint, using massage only. As to whether the fracture of the elbow joint should be treated in an extended or flexed position, that is a matter of individual experience.

Dr. Louis E. Schmidt read a paper entitled **The Limitation of the Practical Value of Urethroscopy.** (This paper has not been received for publication.)

Discussion of Dr. Schmidt's Paper.

W. T. Belfield: It is refreshing to hear from a man thoroughly familiar with a little used instrument, a conservative and unbiased estimate of that instrument's value. This Dr. Schmidt has given; and there is nothing in his paper to which exception can be taken.

I have found the urethroscope of greater value in diagnosis than in treatment—probably because most of the chronic and obstinate troubles in the urethra are due to persistent gonorrhoeal infections, which are localized especially around the much neglected lacunae of Morgagni; and these are inaccessible—for therapeutic purposes—even to the modern electric urethroscope.

Wm. L. Baum: I was much pleased that Dr. Schmidt called attention to the limitations in the use of the urethroscope in view of the fact that during the last few years those who

are most interested in the sale of these instruments claimed that they were almost a "cure-all" for all the diseases of the urethra. The result is that we are continually coming across cases in which the use of this instrument has been followed by more harm than good. The limitations pointed out are practical and cover the whole field of useful urethroscopy. It is a timely paper, because much harm has resulted from the indiscriminate and unnecessary use of this very useful instrument.

The Transmission of Syphilis by Barbers.

William T. Belfield: The writer has personally treated two cases in which syphilis was unquestionably inoculated by barbers—in one by an alum pencil applied to a cut, in the second by the forceps used to extract an ingrowing hair. An outline of each case was read.

Text-books give no definite information as to the frequency or the manner of the transmission of syphilis by the manipulations of barbers, though most of them give the impression that such transmission occurs by razor cuts. Buckley's study of "Syphilis in the Innocent," published ten years ago, is no more definite, except that one case is quoted in which a chancre developed in a razor cut, the bleeding from which was checked by pressure of the barber's thumb. The razor seems, for obvious reasons, the least likely of the barber's tools to convey the infection; the alum pencil and the forceps are probably the usual carriers of the virus.

In order to secure further information, the writer addressed a request for his personal observation of instances of the unquestionable transmission of syphilis by barbers, to each of thirty well-known syphilologists of this country; and he is indebted to nearly all of them for the courtesy of a reply.

Drs. Fuller, of New York; Horwitz, of Philadelphia; Montgomery, of San Francisco; Keber, of St. Louis and Schmidt, of Chicago, furnished each one case of such transmission; Dr. Judkins, of Cincinnati two, and Dr. Baum, of Chicago, three—a total, including the writer's two cases of twelve such instances. Many distinguished syphilologists, including Drs. Hyde, Zeisler and Anthony, of Chicago; Keys, Sturgis, Otis and Hayden, of New York; White and Post of Boston; White, of Philadelphia, Hardaway and Burnett of St. Louis, and Chismore of San Francisco, kindly state that they do not recall an instance of the obvious transmission of syphilis by barber.

As this inquiry has revealed only twelve cases of such transmission, it would seem, at first thought, that such cases must be rare. Yet as the innocent victims of this inoculation—because they have no suspicion of the nature of their sores—naturally consult not physicians identified with the treatment of syphilis, but their family physicians, it seems reasonable to assume that the vast majority of such cases are prescribed for, correctly or otherwise, by general practitioners.

The object of this paper is not to inaugurate a crusade for the education of barbers—though this has been done in other cities, even in Latin America—but to call attention once more

to certain facts that are familiar to all in theory, but forgotten by some in practice. The writer has seen cases of acute syphilis of the throat with fever treated as tonsillitis, scarlet fever and diphtheria—with injection of the antitoxin in one case. Buckley estimates that 10 per cent of the subjects of syphilis acquire the disease in ways other than illicit copulation; and many more, especially women, discover no chancre and are hence ignorant of infection until the outbreak occurs in the throat. It is desirable that we eliminate the chancre, or a history of one, from our conception of syphilis; and regard every sore throat with fever in an adult as the possible result not merely of tonsillitis, scarlet fever and diphtheria, but also of syphilis.

Discussion of Dr. Belfield's Paper.

H. G. Anthony: The semen of a syphilitic when inoculated into a healthy person will not produce syphilis and usually a blood inoculation will not be followed by syphilis. That, I believe, is the reason why so few cases of wound infections are followed by a chancre because the blood is hard to inoculate. If, however, the virus is obtained from a mucous patch the inoculation can be made much more easily.

I have observed this case: A man presented himself with a lesion in the region of the beard which was obviously a chancre. It had developed in a razor cut. He said that he had never been shaved by a barber; that he never used any other man's razor and that he never loaned his razor to any one. It was eventually ascertained that his wife, unbeknown to him, had loaned his razor to her brother who was syphilitic. The brother said that he did not cut himself at the time he used the razor but that when he tested its edge he wet his finger with saliva; his mouth was full of mucous patches at the time and that probably was the source of the infection.

The question has come up before the French Dermatological Society whether a caustic applied to a cut can convey syphilis. There are quite a number of cases on record in which a caustic was used in the mouth of one individual and a short time afterward in the mouth of another, and in that way produced a chancre. I have always looked upon the caustic stick as being a greater source of danger than a clean cut, and Dr. Belfield's paper suggests that that is probably correct.

I have seen several such cases as the doctor mentioned in which the throat lesions were mistaken for diphtheria. In one or two, in which antitoxin was administered, an eruption appeared. At times these eruptions are with difficulty distinguished from the first roseola of syphilis. I had one case under observation for ten days before I could make a positive diagnosis of syphilis.

Wm. L. Baum: The question as to the time of infection in extragenital chancres is a very important one. As I suggested to Dr. Belfield, the presumption is that the infection occurred at the time of shaving or the infliction of the injury. In some of these cases there is always the possibility of a subsequent infection or exposure of the abraded or wounded surface. I

think he is right when he attributes the infection to the indiscriminate use of the styptic rather than to the razor cut. It is interesting to note that there is no such a lesion as a post-mortem chancre. That is, there is no record of an extragenital chancre in the case of physicians who perform post-mortems on the bodies of persons dead of active syphilis. If this is true, the question arises: How long is the syphilitic virus virulent after its deposition on instruments? It is important to determine the time of infection. I am inclined to believe that the infection occurred at the time of the injury or shortly afterward.

It is very difficult to make a differential diagnosis between initial syphilis of the throat and diphtheria, because the chancre follows no particular type. It may present itself in various forms. I recall one case of this kind that was seen by various members of this Society, in which the membrane was distinctly diphtheritic in appearance. Cultures were made, but nothing but staphylococci, streptococci and a few diplococci were found. The difficulties in diagnosing these cases was very well shown in two cases that were admitted to the contagious ward of the Cook County Hospital as cases of diphtheria, having been sent there by men who are familiar with diphtheritic throats. There was a primary chancre of the tonsil with a membrane extending over the anterior pillars of the fauces and a beginning roseola. In the majority of the cases time only and the absence of the Klebs-Loeffler bacillus will determine the diagnosis.

A few weeks ago I saw an interesting case of chancre of the tongue in a young man. He was an excessive smoker and was in the habit of smoking cigars, always holding the cigar on the same side of the mouth. Just where the tip of the cigar touched his tongue there developed a sore which subsequently proved to be a chancre. The presumption in that case is that the cigarmaker in putting the tip on the cigar wet his finger and carried the infection from a mucous patch on his lip. Our statistics show that a large number of cigarmakers suffer from syphilis, especially mucous patches, because they are always addicted to the use of tobacco.

D. N. Eisendrath: This paper is a most valuable one and I want to mention a case in this connection. A young man, a shipping clerk, presented himself to me with a diagnosis of mumps. He had an immense submaxillary glandular enlargement and also a typical labial chancre. I was interested in the manner of infection and learned that it was the habit of the express company men to hand around pieces of chewing tobacco from which everyone would take a bite, and undoubtedly the infection was transmitted in that way.

In regard to the prevention of such cases as Dr. Belfield mentioned: It seems to me that the time has arrived that the state of Illinois should prescribe some kind of an examination for licensing barbers. In Minnesota I saw above each barber's place a license stating that he was duly qualified to follow his trade. I inquired what these qualifications were and the

barber told me that they had to pass an oral and practical examination before a state board, the examination embracing disinfection of instruments, the manner of infection in certain diseases and the method for preventing such infection. When he removed an ingrown hair, instead of doing as most barbers do, he first carefully disinfected his instruments by burning and when the operation was completed he again disinfected the instrument in the flame. At no time did he wipe them on a towel or on his fingers as many in this city do.

It seems to me that the lesson to be drawn from this paper is that at some future session of the legislature this Society ought to take this matter in hand and demand a state examination of all barbers. The barbers tell me that they are perfectly willing to co-operate but that there is no one to instruct them in this work.

The Advantages of an Ambulatory After-Treatment for Some Genito-Urinary Operations. Operations on Hydrocele (Excision of Sac), Varicocele (Excision of Veins) and Internal and External Urethrotomy Without Subsequent Confinement to Bed.

Charles C. Miller, Chicago: The custom of confining patients to bed after open operations for varicocele, hydrocele and urethral stricture, has been rather consistently adhered to by operators, although it is entirely unnecessary and uncalled for, where proper precautions are taken during the operation.

Previous to the introduction of the aseptic technic, a majority of operations of any importance were followed by more or less of a reaction, which reaction was the result of a hasty imperfect technic and infection. Such reaction was characterized by inflammation, suppuration and sometimes sloughing, with constitutional symptoms, that is, a rise in temperature with its usual concomitants. Such a symptom complex after operation, in a majority of cases, made restriction to bed necessary and not elective on the part of the operator. With due precautions in nearly all these operations, we can avoid any reaction which will make confinement to bed necessary, so that practically all of these patients may safely leave the recumbent posture, as soon as fully out from under the effects of the anesthetic.

In this paper, I will briefly outline the precautions to be observed in these operations in order that the patients may safely enjoy pleasant and satisfactory subsequent ambulatory treatment.

I will not review the well known steps taken to prepare a field for operation. In rendering the scrotum surgically clean I will recall to your mind the ease with which strong chemical antiseptics may produce decided inflammation or even vesiculation of this part. This is to be avoided if we wish the patient to enjoy a comfortable ambulatory after treatment. It is also well to remember the frequency of urethral discharge, and after scrubbing the penis, it is well to bandage this organ with sterile gauze before opening the scrotum, then any urethral discharge cannot contaminate the field.

Where we wish to take advantage of an ambulatory treatment after the operation for vari-

coccele I believe that the simplest technic is by far the best. Many operators are fond of exercising their ingenuity and fishing the vessels out of a small incision situated more or less away from the affected parts. An incision over the length of the affected vessels will permit of their isolation and excision with the least possible trauma to surrounding parts and will also permit of a more perfect hemostasis than where we dig down or up to the vessels and then avulse them from their natural bed into what we might lightly term a dislocated operative field. The length of the incision will play no part in the convalescence of the patient, and where it is free the hemostasis can be perfect and we can better avoid trauma to cord testicle and epididymus.

The avoidance of trauma to cord, testicle or epididymus is very important if we wish the patient to enjoy an ambulatory convalescence. Rough handling will be followed by a decided swelling of these parts, and so swollen they become heavy and exquisitely sensitive. Where such a condition is decided the patient cannot be about with comfort and will feel better in bed.

Perfect hemostasis is to be secured. All oozing should be controlled, and then we can safely close and seal the scrotal wound. Drainage is to be avoided, although it would not preclude an ambulatory treatment. Where the scrotum is long and pendant, any excess in length may be corrected by simply excising a portion, and then approximating the remaining wound margins by sutures. This excision of a portion of the scrotum does not interfere with the ambulatory treatment.

In the hydrocele operation, it is well to slit the scrotum over the length of the tumor before allowing the fluid to escape. The parietal portion of the tunica vaginalis should then be dissected out, exercising care as in the varicocele operation to handle the scrotal contents carefully and to secure complete hemostasis. No attention need be given that portion of the tunic covering the testicle, and this organ should be handled as little as possible during the operation. The scrotum is closed and sealed with collodion as in the varicocele operation.

Certain complications may follow these operations. If infection occurs, the wound should be opened below and the cavity washed out with a one per cent creolin solution. Frequent gentle irrigations with this solution will check the supuration rapidly in most cases, and in the absence of a decided constitutional reaction the ambulatory treatment can be continued. Some swelling and tenderness of the testicle and epididymus follow nearly all operations. This slight inflammatory reaction requires no treatment outside of the support given by a bandage, which should be applied to all cases before these patients assume an erect position.

These patients are told when they have recovered from the anesthetic, that it is unnecessary for them to remain in bed. Those operated upon in the afternoon or evening usually get up the next morning. Where the patients are operated upon in a hospital and do not desire to re-

main in the institution, they are able to go home without assistance in three or four hours.

I will not in this paper attempt to discuss the indications for perineal section or external urethrotomy. Before the era of aseptic and antiseptic surgery drainage was used after all operations of any importance. As cleanliness began to play an important part in surgical technic, drainage rapidly fell into disfavor in all operations with the single exception of perineal section. Constant bladder drainage after perineal section seemed to be particularly enticing to operators. In only a very small per cent of cases can it prove of value and in the great majority it will prove actually harmful. As usually applied, it is painful and annoying to a patient. It necessitates a strict confinement to bed and interferes with the liberties of the patient while so confined. When the drainage tube is removed, a fistula remains to annoy the patient for weeks afterward.

In the preparation of a patient for perineal section copious antiseptic irrigations should be used before operations and as soon as a free entrance to the bladder is secured, this viscus should be thoroughly irrigated. After perfecting hemostasis the superficial parts can be closed by closely applied sutures. Free section of the perineum is in favor with many operators. Even if such is used it need not preclude an ambulatory after treatment. It is to be avoided, in that it interferes more or less with the comfort of the patient. One who has had a fair clinical acquaintance with the perineum can successfully divide a stricture of the perineum through a very short incision. Where a half inch incision has served to gain access to a stricture, after it is closed the patient will be hardly conscious of its presence.

When the patient has recovered from the anesthetic, after this operation, he is allowed to get out of bed as soon as he desires. It is well to remember that while the operation has not produced an extensive wound, that the possibilities of infection are present after operation so that considerable care should be exercised in preventing such occurring. Urinary antiseptics are to be given freely by the mouth after operation as well as before, and the perineal cut dressed after each urination with a moist antiseptic dressing, as a few drops of urine will filter through the wound. These moist antiseptic dressings should be used until healing of the external wound is complete. The sutures can be removed in about a week. In all cases there will be a slight febrile reaction but it seldom reaches 102 F. Should it reach this latter point an antiseptic urethral irrigation will cause it to quickly subside. Some pain is noted on urination. This is due to the highly acid urine passing over the raw surface in the urethra. Ecchymosis of the surrounding parts occurs as it does after any perineal section, and the younger patients in some instances complain of pain on erection soon after the operation, although this is less likely to follow the operation where the short incision is used.

A word regarding technic in the division of a perineal stricture through the short incision. If a full sized, absolutely blunt, short beaked sound is pressed against the face of the stric-

ture and then pressed outward at the same time toward the surface of the perineum by directing a knife from somewhat below upward and forward toward the point of the sound we can enter the urethra directly through the anterior face of the stricture. By lengthening our puncture into an incision by carrying the knife slightly downward toward the anus we have made a cut which lies entirely over the stricture and over no healthy urethra unless it be a portion beyond a very narrow stricture. If a filiform has been passed before the sound was pressed against the face of the stricture, that portion lying in the penis can be drawn through the opening in the perineum and urethra, and the portion extending through the stricture into the bladder can be allowed to remain as a guide for the complete division of the stricture. A grooved director with an eye at its point can be threaded upon the filiform and then pushed through the remaining fibers of the stricture and these fibers when steadied upon the director can be divided with ease. Five or six superficial interrupted sutures will close the incision, and when very closely applied in this way the least possible leakage occurs after operation. In the absence of any complication five minutes should be amply sufficient for the performance of this operation although haste is not to be recommended; this of course does not include the passage of the filiform through a stricture of very small caliber. The filiform can be passed before the anesthetic is given and need be a part of the operation.

Internal urethrotomy has always been looked upon as an operation in which an ambulatory after treatment was justifiable. As a matter of fact such is not the case in many instances unless certain precautions are exercised during and after operation. Most men are fairly careful regarding external cleanliness but pay little attention to the urethra. Antiseptic irrigations should be used freely before and after the division of the strictures or many of the patients will develop a decided febrile reaction. It is not safe to have a patient walking about with a temperature in the neighborhood of 102.5 degrees F., yet such is not unusual where the urethral irrigations have been dispensed with.

After internal urethrotomy, we have two varieties of hemorrhage to deal with. In one form we divide diseased vessels in the urethral wall, and a continuous bleeding persists for hours after operation, if left untreated. This bleeding is not due to the division of large vessels as much as it is from the division of vessels whose walls are diseased. Agents acting to contract the vessel walls will fail in these cases, and agents acting as hemostatics by causing a rapid firm clotting of blood are objectionable and for this reason such a bleeding is best treated by continuous pressure. The second variety of hemorrhage is the one which I wish to particularly call to your attention. In this form we cut through a very vascular urethra, and have a sharp free bleeding for a few minutes after operation. Then after each urination we have the bleeding reexcited and persisting for five or ten minutes. Such a bleeding is due to the vascularity of the parts rather than to any disease of the parts. This bleeding if let

untreated can interfere with our ambulatory treatment. The best method of treating it is by prophylaxis. If a one to five thousand solution of adrenalin is gently injected into the urethra and held for five or six minutes before urination, the bleeding will be practically controlled. This agent must be retained in the urethra several minutes before it is absorbed, and consequently it should be used before rather than after the bleeding has been excited.

Now as to the advantages of an ambulatory treatment. Operators are prone to look lightly upon these operations, where the patient submits to one to two weeks confinement to bed after the operation. The same extreme care is not taken in the preparation of the patient nor in the technic of the operation, as any slight reaction is lost sight of while the patient is resting quietly in bed. A traumatic epididymitis is of little consequence when the patient is confined to bed, but it must not be forgotten that such an inflammation may effectually occlude the lumen of this delicate convoluted tubule so that the testicle will no longer be of value for purposes of procreation. If a patient is to enjoy an ambulatory after treatment such a reaction must be carefully prevented. In the perineal operation where bladder drainage is used the patient suffers pain during the retention of the tube, and for a number of weeks after the operation an annoying urinary fistula persists. These are avoided where the technic I have recommended is applied, and at the same time it must not be forgotten that the operation is performed by dividing the least possible amount of healthy urethra.

The patient is subjected to a minimum loss of time from the active pursuits of life without jeopardizing his safety. This minimizing of the confinement to bed and of the loss of time from occupation will cause men to more readily submit, and more men to submit to radical relief for their troubles, which point in itself must be considered an advantage.

Discussion on Dr. Miller's paper.

G. Kolischer: It is to be regretted that the essayist did not give some statistics to back up his statements which simply fly in the face of all surgical principles, especially the principles of operations of the urethra. But, I cannot but admire the courage, or rather foolhardiness of a surgeon who lets his patient get up and go home immediately after having ligated the large veins of a varicocele.

The pathology of the essayist is rather arbitrary. How does he know about those diseased blood vessels which he says he divides once in a while in performing internal urethrotomy. If a severe hemorrhage follows an internal urethrotomy, the operation wasn't performed in a proper way, and tissue outside the structure must have been cut. A properly performed internal urethrotomy divides only cicatricial tissue, that is, fibrous tissue in which the blood vessels are entirely obliterated.

The doctor tells us also in reporting a case of severe hemorrhage that the best means of preventing such a hemorrhage is the use of adrenalin; that is entirely wrong. The best way to provoke a hemorrhage after urethrotomy is to use adrenalin. If we apply adrenalin to a

mucous surface and incise after the anaemizing effect has taken place, a frightful hemorrhage will follow afterwards. That is the reason why the operators have dropped the adrenalin as anaemizing drug previous to operations on the mucosa. The essayist is boasting on the smallness of the incisions which he uses in external urethrotomy. How a man can divide a stricture in this operation without making a sufficiently large incision and not do harm is a mystery which I hope the essayist will clear up. It is paramount to see every detail in external urethrotomy because one of the main points is to lift up and keep out of the way, the bulbus. As to perineal drainage, I never saw a patient who suffered from the drainage through the perineal wound, or, through the insertion of the drainage tube, provided the latter is not a metal tube, or does not reach too high up into the bladder. Drainage through a tube adds considerably to the comfort of the patient as far as cleanliness and keeping dry is concerned. To sew up the incision entirely after the urethrotomy has been performed means a total misunderstanding of the aims of the operation and the intended way of healing. To sew up completely the skin only, over the divided urethra means to invite all the dangers of urinary retention. That is a crime, not surgical method. That a surgeon of any experience never will consent to an ambulatory after treatment of a case of external urethrotomy is explained by the fact that subsequent hemorrhages in cases of external urethrotomy are not so infrequent an occurrence. Just imagine the patient walking around and being surprised by a serious hemorrhage when he may not be near relief or assistance.

Dr. Miller (closing the discussion): Regarding the pathology, my opinions are based upon clinical cases, where there is persistent bleeding after operation. In one of my cases, an internal urethrotomy of the bulbo-membranous juncture, I kept the hemorrhage under control only by constant pressure for eighteen hours. The stricture was cut with the Maisonneuve urethrotome, which does not cut anything but stricture tissue. The character of these hemorrhages, which are not large ones but persistent, lead me to believe that the bleeding is from diseased or altered vessels rather than from large ones. In another case after a similar operation, I had a hemorrhage which persisted for three and a half hours. Observations of stricture tissues divided in plain view through the perineal incision have further strengthened this opinion.

In regards to the objections to the small incision in the perineal section: I can see through a small incision, using proper retraction. I see everything I cut. Of course if the stricture is a long one I make a longer incision; but we seldom see a single stricture which is more than half an inch in length, where perineal section is an operation of election as in many of my cases. With proper care and retraction one can see everything cut through the half inch incision, when properly situated.

As to the ligation of large vessels. I do not meet such, even where I split the perineum from perineo-scrotal juncture to within a half

inch of the anus, as I have found convenient in more than one instance. Hot irrigations have proven all sufficient to control bleeding, coupled with temporary clamping of the vessels. I have always felt after a careful median section that any ligatures applied were more to insure safety, rather than a necessity. Diseased tissues frequently require the light application of the cautery, although I have not time to deal with that matter fully here. The superficial parts can be sutured. The doctor said I open the urethra and then close it up again. He has misquoted and misunderstood nearly every point he has discussed. If he had listened carefully, he would have heard that I said that I close the superficial parts only, to which his objections do not apply.

In scrotal operations, the most evil influence upon the parts is the careless handling. By exercising extreme care in this respect, the patient can be allowed to get up immediately after the operation, if the scrotum is properly suspended, there will be no danger of a decided orchitis, much less at least than where the parts are handled carelessly, and the patient put to bed afterwards. In my earliest cases I put the patients to bed after the varicocele and hydrocele operations. The reaction was distinct and consequently I became more careful in handling the parts and the result was a slighter reaction. My five last patients have not been confined to bed and I find that they enjoy a better convalescence, and that the reaction is slighter than where the technic is careless, the parts handled roughly and the hemostasis imperfect. I am convinced that I can allow these patients out of bed with perfect safety though I do not say that every perineal section can get up in one day. After some sections it is necessary to use drainage. These are the cases where there is an infection of perineum or urinary tract. The patient with sepsis and constitutional symptoms is not to be allowed out of bed. I cite in illustration a case which I had about six weeks ago in which it was necessary to split the entire perineum, and in which I used drainage for 24 hours. This patient had suffered from a 36 hours retention and was suffering from extravasation. In twenty-four hours I removed my drain and in seventy-two hours tied my sutures, closed the perineum and the man was allowed out of bed from this time on.

I regret that the time limit does not allow me to answer fully those who have discussed my paper.

A regular meeting was held November 4, 1903, the President, Dr. R. B. Preble, in the chair.

Dr. Fischkin demonstrated two cases which were under X-Ray treatment.

I. A Case of Blastomycosis.

E. A. Fischkin: Mr. President.—Since Drs. Hyde and Montgomery have shown us the clinical features of Blastomycosis and Dr. Pusey has demonstrated to this Society the value of the x-ray treatment in skin diseases, I do not believe I am demonstrating anything new, but I thought it would be of interest to the members of the Society to see cases of this

kind while under treatment, the subject of which is still in the stage of development.

This man is an Italian, 51 years of age, who has been in this country six years. The family history is negative. He is married, wife and children healthy. The Keratosis on the side of his nose he has had for fifteen years without its undergoing any change. His present disease began in May of this year. A pimple appeared near the external corner of the eye; he scratched it with his finger, shortly after which it got sore, became painful and began to enlarge. Another lesion of the same kind appeared on the back of the neck. When he first presented himself, the lesion around the eye covered an area of about three-fourths of an inch in width and one inch in length extending from the lower eye-lid, encircling the external canthus and reaching the upper eye-lid. A photograph of this stage of the disease shows the extent of the lesion. It was elevated about one-quarter of an inch above the level of the skin, covered with a thick dark and adherent crust, on removal of which a papillary growth was exposed. A part of the growth at the outer corner of the eye was ulcerated, the base of the ulcer covered with thick pus. The border of the lesion had the characteristic abrupt slope and there were quite a number of milium abscesses. The lesion of the neck was three-fourths of an inch in diameter, was of the same character, but not ulcerated and covered with a dry crust.

On account of the rapid growth, its situation around the eye, its papilliform surface and the milium abscesses at the border I diagnosed the case as one of Cutaneous Blastomycosis. This diagnosis was confirmed later on at the meeting of the Chicago Dermatological Society. About three weeks later I removed a section of the skin which was examined by Doctor Herzog and he found the characteristic structure and microorganisms of Blastomycosis.

I put the patient on treatment of potassium iodide and exposed him to the x-rays. After some fifteen exposures which were kept up daily the patient showed marked improvement. The lesions flattened down considerably, the sero-purulent discharge had disappeared, the crusts became dry, thin and white and in places partly detached, and where they were taken off the bases showed clean healthy granulations. At the end of three weeks from the beginning of the treatment dermatitis of the second degree appeared in the region of the eye so that I had to discontinue the x-ray treatment for some time. The patient experienced considerable pain in this region. Both inflammation and pain were allayed by the application of Boracic acid ointment and by astringent lotions. The granulations which flattened down to the level of the skin began to show epithelisation and the ectropion which you now see commenced to form. But a week after there suddenly appeared milium abscesses at the proximal borders of the lesion and in several days a new growth of about one-third of an inch in diameter appeared at the margin of the previous lesion. I had increased the intensity of the radiation and the dose of the potassium iodide after which the new tumor showed in a com-

paratively short time (some eight days) the same signs of absorption and scarification. This reappearance of the growth was repeated several times. After healing on one place the growth appeared in the proximity before even the subsidence of the dermatitis. The last time it took only three days to develop the growth about the size of a cherry, then by increasing the dose of potassium iodide as well as the intensity of the radiation the growth disappeared again so that during all the relapses it has crept over the entire lower lid and over more than half of the upper. The patient had in all about sixty radiations and the dose of potassium iodide is now increased to one half ounce per diem. The whole area was for the past two weeks apparently cured and shows as you see a characteristic soft smooth and thin x-ray scar. But with a magnifying glass you can again detect a few milium abscesses at the inner end of the lower lid. I cannot account for the repeated relapses but I believe with increased doses of iodides I will finally succeed in procuring a complete cure. The growth on the neck has not shown any tendency to relapse. It flattened down quickly but does not show the characteristic smooth scar. There is still a little scaling but I believe one will recognize the lesion as cured.

II. A Case of Lupus Vulgaris.

The next patient is a woman, unmarried, forty-three years of age, born in Norway. Family history negative. No signs of tuberculosis of the internal organs. She attributes her disease to inoculation. When fifteen years old, she says, she was treated by a physician for a mole (a lupus tubercle?) on her nose. The physician had applied some caustic. A pimple developed on that point which did not heal and soon other lesions appeared in the neighborhood and the disease began to spread. She has, since then, been under constant treatment in hospitals, in dispensaries, and under the private care of physicians. She came first under my observation some five years ago as a patient at the Norwegian Deaconess' Hospital. Characteristic lupus nodules were then disseminated over the nose, parts of cheeks and chin. During the ten weeks of her stay at the hospital I treated her with caustics (resorcin; salicylic acid and creosote) and finally with the thermocautery, destroying all visible nodules. Under antiseptic dressings the ulcers soon healed with normal scars and she was discharged seemingly cured. I have not seen her since up to last June when she returned to the hospital with almost the whole face, with the exception of forehead, covered with tubercles. This photograph which was taken on the first day of her return shows the extent of the lupus. With the exception of a few scars from previous treatment on both sides of the chin and on the right cheek near the nose the entire diseased area was densely studded with typical apple-jelly tubercles of lupus the majority of which were exfoliating, while some, at the left commissure of the mouth and under the chin, were ulcerating. Buccally the mucous membranes were also affected to about one-half an inch from the commissures. The movements of the mouth were painful. Treatment was begun by exposure to x-rays on

June 28th and was continued daily except Sundays until July 18th. After the first six radiations the lupus tubercles began to show increased exfoliations. At the end of second week the skin between the tubercles showed marked signs of dermatitis manifested by swelling and redness and the lesions still more exfoliating. Patient complained of severe pain, on account which she could hardly sleep. Treatment was discontinued and diseased areas covered with a fifteen per cent boracic acid and vaselin ointment. On the 23d of July the tubercles began to break down. Liq. Alumin, acet. dressings were substituted which were more effective than the ointment in reducing the pain and in clearing up the ulcers. In about two weeks they began to cover with scars and treatment was again begun August 18th on remaining areas of cheeks and chin. It was kept up for twelve days and again interrupted for dermatitis and pain. A third series of exposures was given Sept. 9th to 15th and again discontinued on account of dermatitis which is now subsiding. She has had about forty treatments up till now and you see all the treated areas free from tubercles. The older ones are covered with smooth healthy scars and the areas lately radiated show superficial sharply cut ulcers corresponding to the seat of previous tubercles with the bases of the small ulcers filled with normal granulations. The upper parts of nose and cheeks were not treated as yet and here you see the typical apple-jelly tubercles. This case is presented as one being cured by x-ray treatment. The result of the treatment in this case is decidedly more satisfactory than in the first case of Blastomycosis. While the curative agent in the treatments of the Blastomycosis may be the potassium iodide this patient had no other treatment than the x-ray's and the cure must be attributed to them alone.

Discussion on Dr. Fischkin's case.

Maximilian Herzog: The first case of blastomycetic dermatitis was, I believe, reported by Gilchrist, and since that time the disease has excited a great deal of interest. Most of the cases have been reported in Chicago. The next case after Gilchrist's was reported in Chicago by Hektoen, Hyde and Bevan, and then there came reports of a number of cases. It is probable that the disease was formerly classified either as epithelioma of the skin, cancer of the skin, or as tuberculosis verrucosa cutis. But the disease is neither one of these conditions. It is evidently a condition *sui generis*.

The histology is characteristic. We have an extensive proliferation of the epithelial cells. I have never seen in any case of blastomycetic dermatitis this proliferation of the epithelial cells as extensive as we see it in true skin cancer. We find in the proliferating epithelial masses little abscess cavities. These cavities are filled with all kinds of leucocytic elements—mononuclears, polynuclears—neutrophilic and eosinophilic, etc., and the tissues around the proliferated epithelia are also infiltrated with leucocytes, eosinophilic and basophilic cells. We further find in the miliary abscesses, giant cells. But the most characteristic feature of the dis-

ease is the presence of micro-organisms of the type of saccharomycetes, yeast cells, or rather of the type of torula, the next relatives of saccharomycetes. I have for your inspection under the microscope two sections, one under low power, showing the proliferating epithelial masses, also the abscess cavities. In the second section you will see one of the abscess cavities under high power, and to the right of the field a polynuclear giant cell, to the left a pair of budding blastomycetes. I will hand around two photographic slides of another case which was presented before this Society a few years ago. In one slide you will see a giant cell; in the other one you will see some budding blastomycetes.

A. W. Baer: The essayist did not tell us how long he kept the patient under the X-ray at each seance, nor did he tell us whether the rays were produced by a static machine or coil, or the kind of tube he used.

I do not know whether the essayist said he used four drams a day of iodide of potassium *per diem* or not. If so, I should say it was rather a large dose.

Dr. Fischkin (closing the discussion): I did not mention the technique in connection with the report of these cases, but I will say that I used a coil with a twelve inch spark. In these cases I have used a six inch tube of medium vacuum, a current of one and one-half amperes the distance varying according to the reaction and the effect desired, duration of exposure from five to ten minutes. As to the question in regard to the dose of iodide of potassium I will say that half an ounce per diem is not too high a dose in this case. The man stands it well and has not shown as yet any symptoms of iodism. Doctor Hyde uses still higher doses of the iodide. The potassium iodide is in all probability the real curative agent in this case, the one which brings about the destruction of the pathologic tissue, the x-ray's stimulating only the proliferations of connective tissue cells and the rapid formation of scar tissue. We are therefor justified to push the doses of iodide in these cases to the utmost limit of toleration. It may be, the patient would not have had the relapses, if I had done so from the very beginning.

Acromegaly with Epilepsy.

Julius Grinker: Before proceeding with the demonstration of my case permit me to give a short review of this strange affection called acromegaly.

It was P. Marie who first described this disease in 1886, and who named it acromegaly, which means large extremities. While it is a fact that the most striking changes are observed in the extremities, yet the disease involves in its progress almost every part of the body.

Its exact etiology is not known. It occurs in every race and both sexes are about equally affected. No age is exempt, the extremes of life form no barrier to its development; even congenital cases have been reported. It is most

often seen in persons between the ages of 20 and 40.

The previous health history of these patients presents nothing remarkable except that in some cases a history of mental agitation, such as fright, worry, anxiety; in others exposure to cold, alcoholism, can be elicited as exciting factors. In many cases its onset is insidious and knowledge of its existence is gained either through the tailor or the shoemaker who observes the change by his measurements.

Although a number of cases are being reported annually from all over the globe, on the whole the disease is rather rare.

Of its pathology we know very little. A number of theories attempt to explain its causation. I shall only mention a few by name: the development theory of Freund; Klebs and Erbs theory of thymus disorder; the nervous theory of Von Recklinghausen who calls the disease an angioneurosis. Most popular is the theory which regards this disease as a trophoneurosis, dependent upon a perversion of the "internal secretion" in the glandular structure of the prehypophysis. This opinion is based upon the fact that clinically and anatomically the pituitary gland has been found diseased in the largest number of cases of acromegaly. Those who found a diseased hypophysis without symptoms of acromegaly having been observed, and those who saw typical cases of acromegaly without any anatomical changes in the pituitary gland, have thrown a great deal of doubt upon this theory. Writers on nervous diseases generally place this disease among the "trophoneuroses."

As a rule the onset is insidious, beginning with general weakness, apathy, mental hebetude, vasomotor disturbances, as excessive perspiration; polyuria, polydipsia, polyphagia; a tolerance of cold weather. Later on come the objective symptoms; characteristic enlargements of the hands and feet with an increase in the size of the bones at either extremity of the face, namely the frontal and inferior maxillary bones, the cervico-dorsal Kyphosis.

As my patient presents a classical case of the disease it is not necessary for me to review all of the symptoms, I shall merely demonstrate him and call your attention to the unusual features in the case.

The patient is 49 years of age, an American by birth and unmarried. His last occupation was that of a captain on the inland lakes. He sailed the lakes since his 14th year and earned the appreciation of his employers so that he was promoted to the captain's post which position he held for about 8 or 9 years. His family history offers nothing remarkable. His father died of some lung trouble at the age of 71; nothing is known of his father's family. His mother is still living, 79 years old, and in good health. His grandparents on his mother's side died at 85 and 82 respectively; one of his aunts on his mother's side had a stroke of paralysis at 70 and died several years later. The mother and sister of the patient who furnished me these data and also photographs of the patient taken at different ages, emphatically assured

me that there never was a similar disease in the entire family.

The patient was born in normal labor. Dentition was not stormy; there never were convulsions. Physical and mental development was perfectly normal in childhood. He did not even have the ordinary diseases of childhood, except an attack of tonsillitis once and lumbago once or twice. Nothing peculiar was noticed except at the age of 12 or 13 his mother observed a slight peculiarity in his gait, it appeared as though his knee yielded a trifle.

His habits have always been good, he never smoked, never indulged in sexual excesses, he never drank to excess, nor even regularly. He never sustained any injuries. In adult life he never was sick until the beginning of his present trouble. Of venereal infections he had gonorrhoea, chancre and suppurating buboes. He never had syphilis.

At the age of 25 he was rather slender in stature. At 35 he began to grow stout. His family are agreed that his disease lasts in all about 8 years. Shortly before the onset of this disease the patient sustained a psychic trauma. Something went wrong with his boat on a very stormy lake. He himself attributes his disease to a vaccination which took place some time previously. He states that shortly after the vaccination he began to snore and to hold his breath. At about the same time there developed attacks of "creepy, chilly feelings," followed by a sense of warmth and perspiration. At first these spells came on at long intervals, later on they increased in frequency and at the present time they occur often. These attacks appear to me to be minor—epilepsy, or so-called petitmal, from the fact that identical sensations are described by him in connection with the major attacks of epilepsy that made their appearance at a later date.

About seven years ago he developed a condition of extreme helplessness which persisted several months. Somnolency and great weakness were marked features. He was too weak to turn about in bed and he had to be fed like an infant. He was in a condition of mental hebetude, was disinclined to talk and at times did not recognize his own mother. He gradually emerged from this condition so that now he is able to be about and take some walks, although the least bodily exertion tires him out and brings on a regular train of symptoms of neurasthenia.

For the first 6½ years he also suffers from so-called crying spells: he begins to cry, there are tears in his eyes, his legs tremble, he smacks his lips, says, "Oh, my! oh, my!" and then all is over. On certain days he has a number of these spells; on others he is entirely free from them. He is unable to control them and on his "bad" days he feels weak and unable to leave the house.

About five years ago he had his first epileptic fit. The attacks are mostly nocturnal or occur in the early morning hours. The description of these fits is typical of major epilepsy, with the tonic followed by clonic convulsions, during which there is frothing at the mouth, biting of the tongue and relaxation of sphincters. The sudden loss of consciousness is

usually preceded by an aura of "creepy feelings" and chilliness in fingers and toes. More often, however, these premonitory symptoms are followed by a feeling of warmth with perspiration and yawning—which constitutes the entire attack. The latter may be either an attack of petit-mal or an abortive major attack of epilepsy with only the usual aura.

Cephalalgia forms a prominent part in his symptoms. His first severe headache occurred shortly before he quit his boat and now headaches appear at irregular intervals. According to his mother's statement the disease has remained stationary these last six years.

Status Praeseus: Height, 5 feet, 11 inches; weight, 241 pounds. His posture is rather peculiar both in walking and standing. His gait is non-elastic and heavy but not atactic. There is a markedly prognathous lower jaw which projects beyond the upper maxilla and is heavy. The lips are large, particularly the lower one. The naso-labial folds have become deepened. The nose is enlarged; the eyes are deeply set and overhung with thickened supraorbital arches on which the eye-brows are unkempt and coarse; the lower part of the forehead is bulging; the cheeks are flattened, the molars and zygoma are not very prominent. His ears are rather small—the opposite is usually found in this disease—and high up, which appearance is caused by the excessive growth of the inferior maxilla. His face is oval, not moon-shaped as in myxoedema; the expression of his eyes is heavy and unanimated.

The hands are enlarged, but the proportion between hands and fingers is preserved; the fingers are sausage-shaped and the hands resemble a spade. The soft parts of the hands are also increased and the lines on the palms are greatly deepened. All the tissues of the hands are excessively developed, the bones, the muscles, adipose tissue and skin. The nails present the characteristic longitudinal ridges so often found in this disease. The feet are similarly enlarged, particularly the big toes; he wears a No. 11 shoe and measurements which I took yield an enlargement in all dimensions.

There is a cervico-dorsal Kyphosis and a very protuberant abdomen. His genitals are atrophied. In many cases there is hypertrophy. In most cases of acromegaly there is no disturbance of the special senses except sight. Hemianopia, optic neuritis, in some cases optic atrophy, limitation of the field of vision, even paralysis of the external ocular muscles have been reported and Oppenheim states that some disturbance of vision is almost always present. In our case I have been unable to discover anything abnormal in the eye; there is no paresis of eye-muscles, no optic atrophy, no optic neuritis. He has no subjective symptoms of disturbance of vision. The retro-sternal dullness frequently found in these cases, is absent here; the lungs and heart are normal in function and in outline; there are no murmurs; but there is some tachycardia present. Pulse varies from 90 to 110.

The patient; voice is low-pitched and seems to be cracked at times and to have a disagreeable note. His speech is deliberate, guttural and seems to stick in the mouth. A laryngosco-

pic examination which I undertook convinced me that the larynx is not enlarged, the vocal cords approximate properly in phonation. The larynx has been found enlarged in many cases. His pharynx is normal. A thyroid gland is conspicuous by its absence. The thyroid in this disease may be hypertrophied, diseased, reduced in size, or entirely absent—very rare. His tongue is excessively large, measures in width about three inches (mine measures just one-half). The largeness of his tongue is probably responsible for his peculiar speech and for the dribbling of saliva from his mouth which occurs mostly during his sleep. The roof of his mouth is somewhat gable-shaped.

Mentally the patient is sluggish, somewhat forgetful and a trifle puerile, although he reasons well and is a great collector of newspaper clippings pertaining to his symptoms. Somnolency is a well-marked feature in his case. While waiting in my ante-room he fell asleep and he informs me that he can sleep almost anytime. He is unable to follow an occupation since he left his boat on account of great weakness and his mental symptoms, the crying spells and the epileptic attacks. He is suffering from polyuria and polydipsia. He has a big appetite and perspires freely. In his urine I found at various times urates, phosphates, once a trace of sugar; once some nucleo-albumen; never serum—albumen spec. gr. was 1030, 1025, and thereabouts; never lighter.

A blood examination which I made once revealed nothing very striking.

The nervous examination yielded the following: Motility good; no paralysis or paresis of any kind; no tremors; no ataxia of station, nor of motion. Reflexes present but very much reduced in upper extremities; Kneejerks can be elicited with Jendrassik method of reinforcement only and the Achilles jerk seems to be absent on both sides. There is no Babinski phenomenon, no Oppenheim sign. There is no Argyll-Robertson pupil and accommodation is good. The McCarthy reflex is present. Sensory disturbances are absent; the pain, touch and temperature senses are normal; there is no sensory dissociation and no astereognosis. On comparing the symptoms present in my case with the tabulated symptoms given by Dr. M. Sternberg in the "Zeitschrift für Klinische Medizin, 1895," I find nearly all of them and one or two symptoms in addition.

I. Objective Symptoms.

(a) **Constant:** Enlarged hands and feet, present; lengthening of face, present; enlarged eyelids, present; excessive enlargement of nose, present; prominence of cheek-bones, not marked; enlarged lips, present; enlarged chin, present; prominent jaw, present; Kyphosis, present; thickening of bones of thorax, doubtful; abdominal respiration, present.

(b) **Inconstant:** Prominence of supraorbital arches, present; exophthalmos, absent; optic nerve atrophy, absent; hemanopsia, absent; impaired hearing, absent; anosmia, absent; disordered taste, absent; enlarged larynx, absent; depth and roughness of voice, present; Erb's dullness, absent; atrophy of testicles, present; enlargement of penis, absent; enlargement of

abdomen, present; enlargement of heart, absent; increased rate of pulse, present; varicose veins, absent; enlarged lymphatic glands, absent; impotence, present; sweats, present; polyuria, present; glycosuria, sometimes; disordered sensibility, absent; pigmentation, absent; warts and moles, absent.

II. Subjective Signs.

(a) **Constant:** Loss of sexual instinct, present; polyphagia, present; polydipsia, present.

(b) **Inconstant:** Headache, present; palpitation, absent; dyspnoea, present; paraesthesia, absent; vasomotor neurosis, present.

III. General and Psychic Symptoms.

General weakness, present; depression, present.

In addition there is epilepsy present, which is extremely rare in acromegaly.

None of the text books speak of its occurrence in this disease. Guy Hinsdale, who wrote a most exhaustive resume of the subject of acromegaly up to 1898, mentions only one case of epilepsy in an acromegalic patient. In that case which was reported by Marinesco, the epilepsy preceded the signs of acromegaly by about $3\frac{1}{2}$ years. It will be noted that in our case the epilepsy developed while the disease was already in progress. Whether it is only coincidence or a result of the disease, I am unable to state.

Course of the Disease.

M. Sternberg speaks of three varieties:

1. A benign form which lasts about 50 years.
2. The usual chronic form, which lasts from 8 to 30 years.
3. An acute malignant form which lasts 3 to 4 years.

This case belongs under the heading No. 2.

Gautier differentiates two stages in this disease: the erethic stage and the cachectic stage. In the **erethic** stage we have hyperaesthesia which manifests itself in headaches and rheumatic pains; 2, a hypertrophy of muscular fibres which may give the patients a muscular power, greater than normal; 3, palpitation of the heart and finally polyphagia and polyuria, which may be considered an erethic state of those organs.

In the **second** stage there is cachexia and decadence; muscular atrophy and cardiac dilatation and an enfeeblement of the circulation, making the patient helpless. In this stage occurs bleeding from the nose and progressive debility. Epistaxis or an epileptic convulsion may end the scene. This patient is still in the erethic stage.

A few words must be mentioned under the heading of **Differential Diagnosis**.

The symptoms of acromegaly are so characteristic that there can be no mistake in its diagnosis. However, the enlargement of the face and hands can occur in other diseases. Of these myxoedema must be particularly mentioned.

In myxoedema, the soft tissues are exclusively affected, the skin is greatly thickened, brawny, and is not movable on the underlying structures, while in acromegaly all the structures are affected and the skin is more flexible and movable.

In myxoedema the face is puffy and is moon-shaped, there is no prognathism and no kyphosis,

while in acromegaly the face is elongated oval-shaped, there is prognathism and Kyphosis.

Under **Treatment** not much is to be said. Thyroid tablets have been lauded very highly and extract of hypophysis has been recommended. These preparations have been used singly and in combination—but no cures of acromegaly have been reported as yet. This patient has taken thyroid tablets without any benefit but the bromides have the effect of reducing the number of epileptic fits, just as in other cases of epilepsy.

Harold N. Moyer was asked to open the discussion. He said:

Mr. President: I cannot add anything to the clinical history that has been given by the essayist. This is a typical case of acromegaly, a comparatively rare disease. There are now in the neighborhood of two hundred cases on record, so that it falls but infrequently within the experience of any individual. I have seen only two cases. This is the third. One of them was the case that has been described by Dr. Mettler, a report of which was published many years ago. I saw the patient a number of times during his life. His case was typical. It presented the same characteristics as the case that has been exhibited, only its features were more accentuated. I have seen a number of cases that have been supposed to be acromegaly, but they were cases of pulmonary osteoarthropathy of Marie, a disease described six years later, and one frequently mistaken for acromegaly.

L. Harrison Mettler: I beg to refer briefly to a case in which the diagnosis of acromegaly, I think, is correct, and to show a very striking chart of the visual fields before the sight was completely gone.

I saw this case about a year ago in consultation with Dr. A. H. Brumback. The doctor informed me today that the patient is practically in about the same condition as when I saw him. I will not go into the minute details of the history, as my time is limited, but will merely outline the main points. The man was forty years of age. There was no hereditary taint and no history of any specific disease. For a long time past he had shown a violent temper, was indolent physically and sluggish mentally. About four years prior to the first frank symptoms of his present trouble he began to suffer from excruciating headaches. These headaches were mostly frontal in location. They occasionally came and went though usually they were more or less constant. They were more marked at night than in the daytime. For the last two years they have been almost entirely absent. There were no epileptiform convulsions at any time. For a time hemianopsia of a remarkable type seems to have been present. The blind half-fields would be for a time on one side, then on the other; sometimes above, sometimes below. When they were below his wife would be called upon to assist him in walking. These attacks of hemianopsia would last sometimes two or three weeks; the longest continuous attack lasted six months. At this time his eyesight was steadily failing. Some other details in regard to the eye symptoms I will not go into at this time. As optic atrophy was

clearly setting in, the patient consulted Dr. Oscar Dodd. Distinct loss of vision began to take place about November 4, 1901. He underwent treatment with iodides, upon whose suggestion I do not know, without any benefit. Soon after the onset of the blindness, a rapid increase in the size of the whole body began to manifest itself. As the family described it, the patients head, and extremities took on a new shape. The lower jaw became prominent and broad. His height seemed to increase and he grew heavier. His fingers became club-shaped, like those you have seen tonight in the patient just exhibited. The upper jaw broadened and protruded but not as much as the lower. The skin was moist and peculiar in its sensation. In short the patient had all the objective symptoms which we have had demonstrated this evening. His average weight was 160 pounds but it gradually increased to 220. He went away for a year and took thyroid extract at a sanitarium with marked improvement in all his symptoms except the eyesight. At present his mental faculties are decidedly dull. He is most of the time in a somnolent condition but may be roused and when aroused will answer irritably. There are no disturbances of the bladder or bowels. No motor paralysis, no sensory or trophic phenomena. Patella reflexes are slightly exaggerated. The urine has several times been markedly glycosuric. A diagnosis of tumor of the brain was made early in the disease by several who saw him, but not carried so far as to say that it was a case of acromegaly. Later developments proved however, and especially when I saw him that it was of the acromegalic type.

I desired to refer to the case at this time, as more of the details I may report sometime later, for the purpose of emphasizing the importance of the eye symptoms in acromegaly and of showing this chart which Dr. Dodd made at the time he saw the patient. As you see it is a typical chart of temporal hemianopsia. It suggests most positively, as Dr. Dodd stated at the time, that there was involvement of the optic chiasm. A moments consideration of the arrangement of the optic fibers as they course through the chiasm will show you how a central lesion located there would produce such a picture of the fields of vision. Of course, there was in all probability some form of tumor, sarcomatous or otherwise, to be found in or near the anterior pituitary body or hypophysis. The central part of the chiasm was implicated, as nothing else could have given the clear picture shown in this chart. In view of the symptoms that developed later, there could be no doubt as to the diagnosis of acromegaly.

A word in regard to the prognosis of this disease. That which was given early in this case was very grave. He was told that he might die inside of a year. Such a prognosis was undoubtedly justifiable at that time. With the diagnosis of acromegaly however and the manifest, though slight improvement under treatment; the prognosis offered was less grave but guarded. Acromegals often live many years, for the disease is usually slow though steadily progressive. Our patient is still alive and has declined in weight to 180 pounds. With

this exception, however, he is just about where he was a year and a half ago.

In regard to the pathogenesis of acromegaly, there is some doubt as to whether it is a disease of the hypophysis or anterior pituitary body. Theories are rife on this subject. Three-fourths of the cases, however, exhibit histo-pathological changes in this organ, and they are the most frequent and most constant of all the findings. If ultimately it should prove to be true that disease or involvement of the hypophysis is somehow a most important factor in the causation of acromegaly, it will illustrate how Evolution may sometimes help us in our pathology; for this disease resembles in some respects the myxoedematous troubles and those which are associated with the glands of the throat.

Gaskell has made the suggestion that in early evolutionary life, the primitive alimentary canal passes up by way of the hypophysis, the infundibulum, the ventricles of the brain and the cebra canal of the spinal cord. This is proved by the embryological development of the anterior part of the archenteron, by the unaccountable presence of ciliated epithelium in the central spinal canal, by the general arrangement and structure of the anterior part of the central relationship of the great class of vertebrates with the articulates. In the evolution of the higher out of the lower fount of life, cephalization outran and encroached upon alimentation; the primitive alimentary organ which ran through the series of segmental rings of nervous matter found in some of the articulates and lower creatures, was constricted and finally severed by the most forward ring of all or the so-called oesophageal brain. A part of the primitive, glandular mouth structure became inclosed within the cranial cavity and remained as a residual substance making up the anterior part of the so-called pituitary gland. Now it is just this part of the hypophysis that is most constantly found diseased in cases of acromegaly—an affection which bears so striking a resemblance in some respects to myxoedema, cretinism and other troubles associated with alterations of the thyroid, thymus and other alimentary, vegetative or rather metabolic glands. This is a most valuable hint and if it stands the test of time and further investigation, it will illustrate most beautifully how biological development may affect and determine through the processes of evolution, not only our normal growth but also the character of many of the diseases to which we are subject.

R. B. Preble: I believe that this disease is by no means so rare as it is popularly supposed to be. In the later stages of the disease, the clinical picture is so characteristic that it is unnecessary to make any more than a cursory observation to enable one to make a diagnosis. If one keeps his eyes open, once in a while he will see cases of acromegaly on the streets. There are two men whom we see constantly on the streets of Chicago who have this disease, and so far as I know they have never been shown to any medical society. The other day on the West Side I saw a woman who is as per-

fect an illustration of this disease as anybody ever saw.

In regard to the cases in the County Hospital in the last eight years there have been four cases, of which this is only one. As I have said, the disease is not so rare as is popularly supposed. Unless one has seen a case or two, it is easy to overlook the condition, and regard it merely as some unfortunate peculiarity of the individual, and the cases go unobserved and unrecorded, just as they did before Marie drew attention to this picture.

Dr. Grinker (closing the discussion): There has been nothing brought out in the discussion which requires contradiction. On the contrary, everything that has been said has made the presentation of this case more valuable, inasmuch as the discussion brought out a number of points which could not be given while I was reading the paper.

The possibility that this disease may be related to myxedema is a good suggestion, particularly in connection with those cases where there is absence of the thyroid. There is no thyroid in this case. Perhaps this is one of the cases where the hypophysis has been compensatory and greatly enlarged, and has overrun its boundaries, giving us the picture of this disease. That has been mentioned by some. Where the thyroid is absent, the hypophysis becomes extremely large. I doubt whether the hypophysis is responsible for all the cases we see. Experimentally it has been proven that the hypophysis can be removed and no acromegaly develop. Many cases of distinct acromegaly have been reported without any changes found in the hypophysis post-mortem. This case was rather peculiar from the fact that its onset resembled the **second** stage described by Gautier, the beginning of the disease being marked by great weakness and prostration, an aggravated kind of neurasthenia. He was in bed and could not help himself. He had to be moved by others. He presented a condition of most aggravated myasthenia. We expect that stage to come after the development of the disease, or a long time after the disease has developed, whereas in my case this seems to have been the beginning of the disease. How many years this man has had enlarged extremities, nobody knows. I have questioned him and his relatives, and they said he always had large hands and large feet, and that corresponds with the usual history of these cases. If he had ordered his shoes of a shoemaker, or had ordered his clothes from a tailor, instead of buying them ready-made, the tailor might have noticed it.

I have nothing to add except one or two points, and that is with reference to the eye symptoms and the epilepsy. Hemianopsia, which is so frequently found in these cases, is absent here. There is absolutely no defect in sight. Epilepsy is a marked feature in this case, and whether it has anything to do with acromegaly I do not know. If it has, there would have been reported more than one case prior to this. I have only found one additional case of epilepsy, and that was a case where epilepsy developed three and a half years prior to noticeable changes in the extremities.

Dr. Ridlon presented a case of **Hip Joint Disease**.

John Ridlon: It is so seldom that one has an opportunity to show a private case of ordinary hip joint disease several years after treatment, and the result obtained, that I thought I would exhibit this patient to you and demonstrate the amount of motion he has. Flexion and extension of the leg are perfect, and it would be difficult for anyone to tell while the patient is walking which was the affected leg. I could not tell myself if the patient had not told me tonight.

This young man is twenty-three years of age, and came to me nine years ago. At that time he had a flexion deformity in the left hip of 45 degrees, and restriction of motion of more than one-half the normal range in flexion beyond that point, and practically complete restriction of rotation in either direction. He had had hip symptoms for nearly five years. He was about nine years old when the first symptoms came on, and was fourteen when he came to me. I treated him in bed for eight weeks with a Thomas hip splint, and corrected the flexion deformity by the leverage action and immobilization of the Thomas hip splint. Then he was allowed up and walked with a long traction hip splint applied, which firmly immobilized the hip, and this he wore for a year. He was under observation after the removal of the splint for two years, and from that time until a few days ago I had not seen him. There can be no question about the case being completely cured.

Carl Beck read a paper entitled **Angioma and its Treatment**, and reported a number of cases treated with different methods. (See Abstract).

Angioma and Its Treatment.

After reviewing the historical development of the treatment, he described a method of his own in dealing with venous and arterial angioma, so-called cavernous and cirroid angioma. The treatment of the latter two is the more difficult, and injections with hot water and the introduction of foreign material, like magnesium, are not reliable, because the surgeon has to depend more or less on good luck, lest untoward results like gangrene, thrombosis and embolism may follow.

The treatment employed by Dr. Beck consists in subcutaneous continuous ligature with catgut in such a manner that the tumor is gradually diminished in size, while through this constriction the healthy skin is stretched and grown. In this manner the tumor gradually turns into scar tissue which can be afterwards excised without defect and a plastic. If an arterial angioma is treated, the ligature of the large afferent vessels eventually, even the common carotid, is to be undertaken.

He demonstrated one case of very extensive angioma of the face and neck treated in this manner, which was thought to be inoperable by two leading surgeons, with a perfect result. He also demonstrated a case treated with electrolysis in a number of cities, in which an

angioma of the nose was successfully obliterated without scar formation.

Discussion.

Victor S. Frankenstein: I think Dr. Beck is to be congratulated on the result he has obtained in the case shown to the Society to-night, and having had care of the first case he presented, I know how difficult it was for him to achieve that result. The child had an enormous angioma at the end of the nose, disfiguring it frightfully. Being a little girl, the parents were anxious about it, and I, at their request, sent the case to several famous surgeons in town who declined to treat it. It had received, before going to Dr. Beck, x-ray and Finsen light treatment, without any avail, so that I am particularly gratified, knowing the people as well as I do, at the result the doctor has achieved.

In regard to the collodion treatment, spoken of, I believe Dr. Beck used it in this case. I think it was recommended by Professor Unna. He did not recommend it, however, for use over soft parts. He claims distinctly to have cured several cases in infancy at the beginning of the angioma. Sometimes these angiomata do not appear at birth, but shortly afterwards. Unna claims that unless the angioma lie on bony structures as the forehead, that collodion is of no value whatsoever, so that the failure of collodion to produce any result was due to the fact that the doctor did not get a sufficient amount of compression upon the tumor by the use of collodion.

The case I have here is rather interesting, and as the subject is up for discussion, I thought I would present it. The case was operated on three years ago. The child is six and a half years of age, and has had the disease since shortly after birth, and the child was brought to me last week because of excessive pain which it had in its arm and shoulder. When first presenting itself, the fingers stood apart; the angiomatous masses were so great as to actually press the fingers apart. It seems to be in a better condition tonight. The fingers are not so filled with blood as they were, and the child does not complain of pain. The only thing I have done to the case is to give a placebo and physic. The angioma covers the palm as well as the dorsum of the hand and extends up the arm to the scapula.

As I have said, the child was operated on three years ago by an eminent surgeon in this city, without any result whatsoever, so far as I can see.

I believe Dr. Beck's suggestion as to treatment is a valuable one, and I will try to carry it out.

Dr. Halstead presented two specimens:

- (1.) Tumor of Salivary Glands. (2.) Fibromata of the Valva.

A. E. Halstead: The tumor that I shall show involves the three salivary glands, and was removed from a woman 56 years of age. She was referred to me by Dr. Robert Harvey, of this city. She gave a history of having received an injury at the age of six which probably caused a fracture of the lower jaw. Within a few months after the injury, before the wound had completely healed, a tumor developed, which

grew steadily until she reached the eighteenth year. During the eighteenth and nineteenth years it remained stationary. At about that time someone attempted to remove the tumor, but after cutting into it discontinued the operation. The wound became infected, and part of the tumor sloughed away. After the nineteenth year it grew steadily up to the present time. When I saw her this summer the tumor had attained quite a large size, and caused great deformity. There was considerable pain and the tumor, which projected into the mouth, interfered with her eating. It almost completely closed the pharynx, pressing the tongue up against the roof of the mouth, and leaving only a small space for taking food. At the time I saw her she could only take liquid food.

She was operated on the 20th of August, and these photographs were taken a week after the operation. She made an uninterrupted recovery and is now well, excepting that she has some asymmetry of the face, produced by traction of the tumor. One interesting feature is that the tumor so completely surrounded the body of the inferior maxilla on the right side that one could not detect any bone on that side. The tumor grew all the way round the bone and for that reason and from the fact the history showed that the tumor followed a fracture of the jaw at about the second dentition, a diagnosis of proliferating maxillary cyst was made. This diagnosis was found to be incorrect at the time of the operation. The tumor involved the parotid, submaxillary and sublingual glands on one side. The sublingual is not all here, it has broken up into small pieces and part of it lost. The largest tumor is the submaxillary gland, the second one is the parotid gland.

These tumors that I now show you are of similar structure, and are soft fibromata. I removed them last Saturday from the vulva of a colored woman. When in place, and the skin stretched from the weight of the tumors, they reached half-way down to the knee. The larger ones grew from the sides of the vulvar orifice, and this small one from the anterior part just above the clitoris. The growth was very easily removed. It bled some, but not sufficient to cause any serious symptoms. Without having had a section of the tumor made, I should say that they are probably soft fibromata. The patient a woman of 50 years, gave a history of having had the tumors for 15 years. They grew slowly for about ten years and then ceased. They caused no symptoms excepting the inconvenience occasioned by their presence.

A regular meeting was held November 11, 1903, with the President, R. B. Preble, in the chair.

N. P. Colwell read a paper entitled *Mycosis Pharyngis, Leptothricia and Keratosis Pharyngis*:

The disease more commonly known by the first of these names, but more properly called by the latter, is one of the minor throat ailments, which should be understood and recognized when seen. The writer has taken up this subject, because of his conviction that there are two distinct diseases which are being confused under the name *Mycosis Pharyngis Leptothri-*

cia, the most common of which, and the one which will be dealt with mostly by this paper, should more properly be called *Keratosis Pharyngis*.

It is an apparently non-infectious disease, found with rare instances in adults or during the prime of life, characterized by the appearance upon the ring of adenoid tissue surrounding the oro-pharynx, of small, white, isolated, tough, firmly adherent excrescences, with only a slight inflammation of the underlying membrane, but seldom if ever causing any constitutional disturbance. Another characteristic is the persistence with which the growths recur after removal, no matter what means are used to remove them.

Mycosis Pharyngis Leptothrīcia, on the other hand, is more fittingly applied to the disease, somewhat more rare but badly confused with the above, which is characterized by soft, white, easily removed excrescences or accumulations, found in patients at the extremes of life or in patients where the health has been greatly enfeebled through some known disease. This trouble is usually accompanied by an inflammation of the underlying membrane and by a more or less severe constitutional disturbance. Pearce reports one case where there was perforation of the larynx and another where the leptothrix through gall-stone formation ultimately resulted in death. The first of these cases had tuberculosis of the larynx, following pulmonary tuberculosis, while the second case had been sick with cholelithiasis for over three months, and had undergone an operation for the removal of the gall-stones two months before death, when at the post-mortem examination leptothrix filaments are found.

History: According to several authorities, the first time we heard of this disease was in 1873, when B. Fraenkel showed a case in his clinic which he called *Benign Mycosis of the Pharynx*. Not until 1895 was it shown by Siebenmann that the more important histological condition was not the presence of the leptothrix so much as the cornified condition of the epithelium composing the inner core of the excrescences. Siebenmann's views have since been upheld by the researches of several investigators. From the cases seen and studied the writer is inclined to side with the Siebenmann faction and call the more common form of the disease a *Keratosis* rather than a *Mycosis*.

Anatomy and Pathology. It is the appearance of the excrescences in the throat that usually calls attention to these patients. The growths are small, white, isolated, tough and firmly adherent to the membrane. They vary greatly in size, sometimes being mere points, sometimes being about a millimeter in diameter. The shape also varies. They may be rounded, hemispherical, conical or hornlike, or they may have clubbed ends with narrow pedicles. While as a rule the growths are isolated, there are occasionally cases where two or three growths seem to coalesce, forming white, tough masses.

The growths are found most frequently on the tonsils and the base of the tongue, are found sometimes on the walls of the pharynx, on the

eustachian cushions or upon the epiglottis. They seem to prefer some protected portion of the membrane, and to this fact in all probability is due the former idea that they were limited to the lacunae. They are found not only in the lacunae, however, but also in the depressions between the circumvallate papillae of the base of the tongue, between the pillars of the pharynx and the tonsils, and occasionally in the glosso-epiglottic fossae. Two cases are reported (Hemenway, Wright), where the excrescences were found in the nasal passages, while one case (Brown, of Toronto), had growths in the larynx. Excrescences are found also on the more exposed portions of the tonsils and throat, but if so are usually not so prominent or are smaller in size. Of the thirty cases which are being studied in this paper, excrescences were found on the tonsils in every instance (100 per cent), on the base of the tongue in eighteen cases (60 per cent), on the walls and pillars of the pharynx in six cases (20 per cent), while in one case growths were seen on the pharyngeal tonsil.

On careful examination the excrescences are seen to consist of an outer layer which is soft and pulpy, easily removed, and made up of degenerated cells, cocci of various kinds and granular debris, intermingled with which are numerous leptothrix threads. This outer layer covers a central core or deeper layer of tough, fibrous consistency, firmly adherent to the basement membrane which, on microscopic examination is seen to be slightly thickened. The cell composing this central portion are flattened or elongated and arranged perpendicularly to the underlying membrane in some instances, while in others the cells are piled upon each other and lie parallel to the membrane. No leptothrix filaments are found in the central portion, but are found almost constantly in the outer layer.

Kyle speaks of the condition as being a coagulation or liquefaction necrosis of the superficial epithelial layers of the mucous membrane of the throat.

Small nodules beneath the mucous membrane have been observed by some writers which they claim subsequently developed into excrescences. One of the cases studied in this paper has a similar history. These are apparent also in some of the slides studied by the writer, although their development into excrescences has never been observed. It is further stated (Kelly) that cross sections of these nodules reveal cavities lined with epithelium, and, what seems to be an important observation from the etiological standpoint, these cavities contained no leptothrix.

The underlying membrane as a rule shows only a slight inflammation and constitutional disturbance is rare, and then probably due to some coexisting ailment. In the thirty cases mentioned the tonsils were enlarged in nineteen (63 per cent), but this was in all the cases where any note was made in the records regarding the size. There was inflammation of the air passages, either rhinitis, pharyngitis, laryngitis or bronchitis, in eleven instances (36 per cent), and marked inflammation of the tonsils in six cases (20 per cent); five cases (17 per cent) had some form of skin eruption, being one case

each of the following: Eczema, urticaria, herpes and erysipelas. One case had an enlarged thyroid gland and two cases were phthisical.

Etiology: Owing to the fact that the leptothrix buccalis is almost always found on the excrescences, it has been looked upon as the most important etiological factor, hence the name mycosis. Some writers say the disease is due to a lowered vitality, which allows the leptothrix to attain an unusual growth (Hall and Tilley), or to penetrate the mucous membrane resulting in the formation of the excrescences. This may be so in the case of "true" mycosis. Experiments have been made by various investigators to prove the infectious nature of the leptothrix, but all have been failures with but one exception, that by Decker and Seiffert. No details of their work have been given, however, so the evidence is hardly sufficient.

Concerning the leptothrix buccalis—this micro-organism appears as long threads or rods, usually straight, but sometimes wavy or curled, and sometimes having apparent joints or nodules. They are arranged in tufts, sheaves or bundles, or may be void of any regular arrangement. Under the oil immersion we get smaller, rod-like growths radiating from the cornified mass, giving, when the section shows them longitudinally, a ciliated appearance. Again, they are so thickly interwoven as to allow only small portions of these smaller rods to be seen in microscopic sections.

The leptothrix is a constant habitat of the mouth, the net-work of filaments sometimes forming a complete covering of the pharynx. (Shurley). It is found abundantly in the surface layers of the excrescences, but only a very few are found in the central portions; it is found in the tonsillar crypts of chronic lacunar tonsillitis, whether there be an accompanying keratosis or not; even after the keratosis has entirely disappeared they are found in the tonsillar crypts; and again these fungi or their spores are more or less in contact with the mucous membrane, the tonsillar crypts and the pharyngeal follicles of the great majority of the human race, while only a few ever develop a keratosis. Hence the importance of the leptothrix as a causative factor is much in doubt. They seem to thrive on necrotic tissue as in dental caries and in the various forms of mouth ulceration and the decaying horny epithelium forms a suitable soil for them. Over-hot drinks, over-seasoned foods or other irritation of the throat, by causing a rapid desquamation of epithelium would doubtless favor the growths.

Keratosis of the pharynx is found most commonly between the ages of 15 to 30 years. It is found less frequently at the extremes of life, childhood and old age. In the thirty cases mentioned, eight (11 per cent) were between the ages, 11 to 20, fifteen (50 per cent) were between the ages 21 to 30, three (10 per cent) between the ages 31 to 40, one (3 per cent) was between the ages 41 to 50, and three (10 per cent) were between the ages 51 to 60. Therefore, 77 per cent were between the ages 11 to 30, while only 23 per cent were over 30 years.

It is somewhat more common in women than in men, being in the extreme proportion of 9 to 1,

according to Shurly. Kelly says 60 per cent are women. Only sixteen (53 per cent) of the cases herein mentioned were women.

Occupations where the voice is much used have been mentioned in the literature as having some etiological importance, but if these occupations have preponderated in any group of cases, it could be explained by the fact that such people are more apt to have examinations of the throat made and the keratosis thereby discovered. In the collection herein given it is seen that sedentary, indoor occupations are the rule, nineteen being students, book-keepers or housewives. The list also includes two lawyers, a minister, a draughtsman, a microscopist, a cooper, a cook and a mail-carrier. In three instances the occupations were not given. Only one case in the thirty, the mail-carrier, had an out-of-door occupation.

The social position is apt to be that of the well-to-do class, since the symptoms are too slight, as a rule, to demand expenditure for treatment. Those cases which are found are usually accidentally discovered by the patients themselves or in the routine examination of the throat during examination for other ailments.

The general health is usually good, although numerous coexisting ailments are noted in the literature. It is an interesting fact that sometimes efforts at a cure of the keratosis will result in a cure of the coexisting ailment, while the keratosis persistently remains. (Richardson). Kelly states that he found chronic lacunar tonsillitis with all of his cases. The keratosis cannot be ascribed to this disease, however, since the great majority of cases of chronic lacunar tonsillitis, as pointed out by Shurly, are not attended by keratosis. A chronic enlargement of the tonsils is suggested by some authors as having some etiological importance. As stated above, nineteen (63 per cent) of the cases herein given had an enlargement of the tonsils. In order to test the value of this last observation and to get some idea as to the general prevalence of tonsillar enlargement, the writer took 200 cases at random, except for the fact that he omitted any who came purposely for tonsillar trouble, and in sixty-six cases (33 1-3 per cent) he found more or less enlargement. This percentage may be higher than the general average, however, since most of the 200 cases had come for treatment of nose or throat ailments which might be expected to have some accompanying tonsillar enlargements.

Symptoms: In fifteen (or 50 per cent) of the cases herein studied, there was experienced a pricking, tickling or dry sensation in the pharynx, causing a continual desire to clear the throat or even setting up an annoying, hacking cough. In eight cases (27 per cent) there was an excessive secretion of mucus into the throat, while in five cases (16 per cent) there was sore throat or pain on swallowing. In ten (or 1-3) of the cases, no symptoms at all were experienced, the excrescences being discovered by accident.

Other symptoms are mentioned in the literature as malaise, fatigue on slight exertion, and aphonia on the part of those who use the voice a good deal, as minister or lawyer. There is

often a bad taste in the mouth, particularly in the morning, and there may be recurrent attacks of sore throat or excess of secretion. Gastro-intestinal symptoms are mentioned by some writers, as well as fever, pain and swelling. The reports do not show clearly, however, that these severe symptoms were not due to some accompanying ailment. There may be nervousness or headache, or there may be worry or mental depression on the part of some patients because of the persistence with which the disease resists treatment.

Diagnosis: The diagnosis which is generally easy, depends upon the following points: Examination of the throat shows small, white, discrete patches, usually protruding from the lacunae or protected spots, but which may also be seen on other and more exposed surfaces of the tonsils, base of the tongue or pharyngeal walls. They are usually limited to the ring or adenoid tissue about the oro-pharynx. The growths are found to be firmly adherent to the underlying membrane and to consist of a tough central portion made up of cornified epithelial cells surrounded or covered by an easily removed, soft, pulpy layer of cells and debris. Intermingled throughout this soft layer are to be found numerous filaments of the leptothrix. The absence of inflammation in the underlying membrane, absence of constitutional disturbance, and the persistence with which the growths will return after removal, are also characteristic of keratosis.

It is to be differentiated from chronic lacunar tonsillitis by the fact that in the latter the deposits are entirely limited to the tonsillar crypts, are foul smelling and are easily pressed out, not containing the tough central portion.

From mild diphtheria it is differentiated by the fever and increased pulse rate, as well as by the inflammatory condition of the membrane in the latter disease and by the membranous appearance of the growth.

Prognosis: The disease is harmless, as a rule, although its persistence and liability to recur are characteristic. It has been stated that if left alone the growths will go away sooner or later, but sometimes it is decidedly "later." One of the cases of the group studied, a man, stated that he had seen the spots in his throat "for the past two years or more."

With the growths in the pharynx it seems that sore throat is more apt to set in, and the cough set up by the tickling sensation may cause more or less inflammation, unless proper treatment is carried out.

Treatment: The disease usually demands no special treatment, being not harmful as a rule. Often a placebo is all that is required.

But if the disease is accompanied by a co-existing throat trouble, or by the disagreeable prickling sensation, or if the presence of the growth in the throat are a source of anxiety to the patient, then their removal is indicated.

Sprays, gargles and local applications of almost every kind have been tried. They have been useful in many instances in removing co-existing throat trouble, but their effect upon the excrescences has been decidedly unsatisfactory.

Internal medication has likewise proved unavailing.

Irritation of the throat seems to aggravate rather than check the growth of the excrescences, therefore, chemical caustics, unless they destroy the site as well as the excrescences, could not be recommended.

The use of a sharp curette or biting forceps, after cocaineization, followed by the application of a chemical caustic or pure tincture of ferric chloride (Grayson), or by the electro-cautery (Browne) to destroy the site is of undoubted value. One objection offered to this method is that after you have thus removed the excrescence you have nothing to guide you to its site, especially if it happens to be in some remote spot, as far back upon the base of the tongue or within the glosso-epiglottic fossae, which would necessitate the cauterization of a larger area than needed, and cause more soreness of the throat than necessary. A simple and decidedly effective method is by the use of the galvano-cautery. The favorite electrode is a small, rather pointed loop, which, fitting over the excrescence, can be pressed into the membrane at its base, thus destroying its site at the same time you remove the excrescence. This was used in twenty-four of the group of cases studied. The result was a cure in twelve cases. Five cases became discouraged before treatment was complete, although the throats showed improvement the last time seen, while in seven cases the results were not known. It is thought best to remove but two or three of the excrescences at a time, first applying a 10 per cent cocaine solution, being careful to cauterize no more of the membrane than is necessary to destroy the site of the excrescence, then ordering for the patient some sedative gargle or spray to use at home during the intervals between visits. By this procedure it is the hope that the throat will not be rendered so sore as to produce an exacerbation of the disease.

The writer wishes to acknowledge his indebtedness to E. Fletcher Ingals for many suggestions in the preparation of this paper. Further, twenty-eight of the thirty cases herein studied are from the carefully kept records of Dr. Ingals' patients, some of whom were seen and treated at times by the writer. Acknowledgements are also due to Professor Hektoen, and the gentlemen in the Pathological Laboratory of Rush Medical College, for many courtesies shown during the histological study of the subject, and especially to Mr. H. L. Metcalf, who prepared some of the slides examined.

1. Hall & Tilley, Diseases of the Nose and Throat, Second Edition, p. 268.
2. D. Braden Kyle, Diseases of the Nose and Throat, 1899, p. 389.
3. Ernest L. Shurly, Diseases of Nose and Throat, 1900, p. 481.
4. Alfred Stengel, Text Book on Pathology, Third Edition, p. 265.
5. Charles Prevost Grayson, Diseases of the Nose, Throat and Ear, 1902, p. 243.
6. Lennox Browne, The Throat and Nose and Their Diseases, Fifth Edition, 1899, pp. 361-364.
7. A. Brown Kelly, Mycosis Pharyngis Leptothricia and Keratosis Pharyngis, Reprint, 1896.

8. Charles W. Richardson, Keratosis of the Pharynx, *Amer. Jour. of Med. Sci.*, Oct., 1902.
9. E. Harrison Griffin, Mycosis of the Tonsils and Base of the Tongue, *N. Y. Med. Jour.*, Dec. 14, 1901.
10. P. S. Donnellan, Naso-pharyngeal Mycosis with report of a case, *Phila. Med. Jour.*, Dec. 8, 1900.
11. F. E. Waxham, Mycosis of the Throat and the report of a case, *Colorado Med. Jour.*, Dec., 1900.
12. Hughlett Hardcastle, Mycosis Tonsillaris, *Md. Med. Jour.*, Apr., 1901.
13. E. P. Daviss, A Case of Myosis, *Tex. Med. Jour. (Austin)* Sept., 1901.
14. E. Fletcher Ingals, Disease of the Chest, Throat and Nasal Cavities, Fourth Ed., pp. 438-440.
15. James Edward Newcomb, *American Text Book on Diseases of the Eye, Ear, Nose and Throat*, 1899, pp. 944-945.
16. Richard Mills Pearce, Contributions to the Pathology of Leptothrix Infectious in Man, *Univ. of Pa. Bulletin*, Aug., 1901.

Discussion on Dr. Colwell's paper.

Joseph C. Peck: Mr. President—This subject is very interesting. When we read papers on this subject, we are struck with their great similarity. They are all very much alike. I have made a study of this subject, and about two years ago I reported fourteen (14) cases of mycosis pharyngis and general hyperkeratosis, and I find that this report tonight is almost identical in tone with what I found in the literature as well as in my own cases. There has been nothing new in regard to this subject since Siebermann brought forth the pathology of this disease. From my experience I find most of the cases are either associated with some process of decomposition, or suppurative condition about the body, either an ozena or chronic rhinitis, or otitis media, or caries of the teeth, or some form of intestinal decomposition. The disease is not as rare as one would at first imagine. It is diagnosed frequently as follicular tonsillitis, and inasmuch as it does not cause much or any discomfort or annoyance in most patients, very little or no attention is paid to it.

With reference to the treatment, the use of the cautery seems to be effective. In all my cases I was able to cauterize or remove the tonsil, if the disease was confined to the tonsil, or destroy the hyperkeratosis directly on the mucous membrane, and often the patients remained cured, or if they were not cured their symptoms were relieved.

Homer M. Thomas: Cases of Pharyngo Mycosis are of increasing scientific interest to the Laryngologist. A study of the two forms, namely, the Leptothricia and Keratosis, reveals individual and special manifestations in each particular case. In my experience the Leptothricia variety is the most frequent. I believe the first clinical presentation of a case of this kind before the Chicago Medical Society, was made by myself some fourteen years ago. The patient was a Chicago lady, who while traveling abroad, consulted the noted specialist, Fraenkel, and remained under his care for some six weeks. Finding it neces-

sary to return home, she was kindly referred to me for treatment by Fraenkel. I instituted a thorough course of galvano-cautery applications, and was rewarded at the end of some six months' treatment with an apparent cure of the case. We know the etiological factor is the Leptothrix. This exists in the secretions of the mouth and finds in an acid condition an acute inflammation of the mucous membrane of the pharynx, or the crypts, a suitable soil for growth. The disease is usually attended by some local inflammatory condition, which is either acute or chronic. Pathologically the Leptothrix belong to a schizomycetes group of fungi. Microscopically they appear as red-like cells, imbedded in amorphous granules. The pharyngeal membrane is usually thickened and the superficial epithelial layer of cells are pressed out of position. The epithelial cells undergo coagulation-necrosis with desquamation. The patches are white in color and the surfaces furred. The condition is harmless, but will persist with the individual unless removed by active treatment. In the line of treatment, I have tried a large variety of astringents, but have found they produced more local discomfort than they did good. The form of treatment, which I have found most efficient, is a sharp pointed galvano-cautery electrode, introduced directly into the diseased nodules. If this treatment is thoroughly persisted in for a sufficient length of time, and the general health of the patient at the same time well maintained, the chances of a complete cure are excellent.

I agree with the author of the paper that unless the growth is exciting undue annoyance, it is as well to leave it alone as to disturb it by energetic efforts at treatment.

We are certainly indebted to Dr. Colwell for the classical resume, so ably presented, of this entire subject.

Dr. Colwell (closing the discussion): I have very little to add except to say that I agree with the gentlemen who have spoken in regard to the value of the cautery treatment. One of the former methods was to remove the excrescences by the sharp curette, and then the site of the disease was cauterized by chemical caustics. The best way I have found of treating these cases is to use one of the pointed electrodes with which we can take away the excrescence at the same time we destroy the site. Where the growth is situated on the base of the tongue, if you remove it by biting forceps, and then touch the site with chemical caustics, you are apt to cauterize more space than is necessary, since the excrescence itself is the best guide to the site. But I agree with the gentlemen that the best plan of treatment is by the electric cautery, and it is the most successful, where you are careful not to cauterize too many points at one time, otherwise the extreme irritation is liable to cause the formation of more growths.

The Work of the Milk Commission.

Mrs. Mary R. Plummer gave an outline of the work that this commission is doing. She referred to certified and inspected grades of milk, saying that there is no compulsory examination of cows unless there is complaint. Farmers who

desire to furnish pure milk to the community do not object to having their cows and dairies inspected. She mentioned five farms which are under the inspection of the commission. These farms furnish either certified or inspected milk. The inspectors of the commission make periodical inspections and examinations of the dairies and cows of these farms, and if any one farm is not up to the standard exacted by the commission, the inspector offers suggestions for improvement. Before milking the udders are wiped off, the milkman is compelled to have his hands thoroughly clean; the milk pail is thoroughly cleaned, and the first milk is discarded, because it is thought bacteria gather in it.

Mrs. Plummer then described how the milk is strained, bottled, and sold.

Mrs. Moulton supplemented the remarks of Mrs. Plummer by asking the support of every physician and nurse. Without the support of the medical profession and of nurses, she did not think the commission could make much progress.

Frank X. Walls: The work of the Milk Commission during the past year has been phenomenal in many ways. The function of the Milk Commission, as stated by Mrs. Plummer, was to get good milk into the City of Chicago, and that was to be done by inspecting the farms, and by seeing that the milking was done under proper hygienic conditions, the milk quickly cooled, and rapidly transported to us. You can readily see that this was an enormous task for any Commission to attempt—to certify whatever milk came under these requirements. We should, as a Society, and as members of hospital staffs, insist upon it that hospitals and our patients shall purchase only such milk as comes up to the standard of requirements laid down by the Milk Commission. But for the Milk Commission to engage in trade, the public selling of this milk, is, I think, in conflict with well-recognized establishments in this city that it is our duty to encourage rather than compete with. The public can afford to pay for good milk, such as sold, for instance, by Gurler, or the Walker Gordon Company, and this Commission has no right to enter into a trade which will conflict with the interests of these men or any other who wish to sell certified milk. It seems to me an effort should be made to encourage all farmers to put their dairies in good condition, and to bring about as ideal a condition as possible on the farm. Let the Commission continue to secure milk and deliver it to the poor. The poor need it. But outside of giving good milk to the poor, I question whether this Commission should undertake to engage in the general delivery of milk. Hospitals should be obliged to procure a good quality of milk from certified dairies, and families who can afford to pay for good milk should be furnished with a list of certified dairymen and encouraged to purchase their supplies from them. The certification of milk should be the first duty of the Milk Commission, and the distribution of pure milk to the poor should be an incidental philanthropy.

Wm. K. Jaques: I have watched with more than usual interest the work of this Commis-

sion during the past season. They have worked with an energy that is born of appreciation of the fact that the milk problem is one of life and death. The infant mortality has been materially reduced, as Dr. Reynolds has said, during the past summer, through the efforts of these women. Mrs. Plummer has told you something of the way the milk is handled on the farm. I will tell you something of the way the milk is handled in the city by the small dealer.

The dust in our city is made up largely of excreta. Human and animal feces, sputa, etc., are ground together, and the dust of the streets is wafted over the city in clouds of infected filth. The small dealer in this atmosphere bottles his milk, or if he sells in bulk and complies with the law, each quart he sells he must stir thoroughly the eight-gallon can from top to bottom, in order that the milk and cream may be thoroughly mixed together. Thirty-two times this infection takes place in selling an eight-gallon can of milk. Would you have your babies fed on such milk? The driver washes the bottles, but if the bottles, when they come back to the wagons from the customers, are reasonably clean, they are not washed at all. I have witnessed the washing of milk bottles of one dealer. A wash-tub was filled with water from the hydrant, a little washing soda placed in it, and the bottles placed in this tub to be soaked; then they were taken out, placed in a second tub of water, in which there was no washing soda, rinsed, set up and allowed to drain. If one of those bottles had come from a mother whose child was sick with cholera infantum, or whose children were sick with scarlet fever or diphtheria, that bottle would doubtless have infected every bottle in this tub. Yet these bottles were filled with milk and scattered through the community and children drank milk from them.

If this Milk Commission, with their work during the past summer, can show us such wonderful results, they need the co-operation of the members of the Chicago Medical Society to continue their good work. If a comparatively small number of bottles of certified or inspected milk enough to feed five hundred babies a day, will bring about such results as this, what would be the result if the thirty thousand cans of milk that come into this great city every day should have such intelligent inspection as the members of this Commission have given the milk that comes from some of the farms mentioned?

In the City of New York the New York Medical Society has established a Commission on similar lines. They employ physicians whose duty it is to inspect the farms of the country, and a fee is paid to these physicians for such inspection. This helps to carry on the work. If the Cook County Medical Society would agree to take only the milk from those farms or from those dealers who have their milk produced under the conditions as laid down by the Milk Commission, at once we would see hundreds of milk dealers and farmers asking the Milk Commission to inspect their places and farms, and paying a fee for so doing, and in this way we might receive means for carrying on the work

without entering into competition with the regular dealers. As soon as you do that you will have lots of trouble.

A. Belcham Keyes: I would like to add a few words. The point is that in the spring some philanthropic people got together and subscribed \$5,000 and formed the Milk Commission, under the auspices of the Children's Hospital Association.

Since July this Commission has distributed, at cost, a third of a million bottles of modified milk, and thereby reduced materially the death-rate of infants in Chicago. It has also inspected farms and improved the conditions there in many places.

The need of improvement is striking. Milk now is forty-three hours old from the time of milking to the time of delivery in Chicago, and sometimes even older.

The condition of the farms is also poor in many places and could be much improved by educating the farmer in farm hygiene.

When we remember that milk is a good culture medium, we cannot be surprised that Enterocolitis among children is rife in summer and not infrequent in winter also, under these prevailing conditions.

The question is, how to continue the good work, as we are now expending \$1,000 per month more than the receipts, and voluntary subscriptions are not going to continue for all time thus liberally.

If the Commission could fill prescriptions of doctors for modified milk at a profit, it could be made partially self-supporting and continue its charity work also, and the voluntary contributions would make up the smaller deficit, and thereby render the work permanent.

If a hospital can rent beds to the sick, and not be called to account for running a hotel, and the same hospital call itself free because it has four or five free beds, and the rest be rented for from \$10 to \$35 per week, and also receive bequests and donations and solicit aid, then the Milk Commission can fill prescriptions and not be considered as interfering with the trade of the milkman.

The Commission would pay the farmer his price, would modify and charge for this, and the milkman would deliver and get his profit, and no one would be the loser.

I might also cite the Relief and Aid Society, who solicit you to buy the wood and assist the unfortunate unemployed, and do not consider that they are interfering with the wood yards kindling trade.

Certainly it seems very unpublic spirited not to continue a charity that is so needed in Chicago, and that could continue, with this aid, the good work so ably begun by Mrs. Moulton and Mrs. Plummer.

The Milk Commission has distributed to the poor a third of a million bottles of milk (whole and modified) since July, at cost price to those who could pay, and given it to those who could not, and it hopes to continue the good work, and asks for your co-operation, and as voluntary subscriptions will not always make up the deficit, it wishes permission to do some of its work at a profit, to those who can afford to

pay, and thereby render much needed assistance, and place the charity on a permanent basis.

The position of Chicago in accepting two weeks' time of Mr. Strauss and his assistant, and a gift of a \$1,500 outfit from him for the commencement of this work, has placed it on its honor to continue it as a permanent charity, and unless we rise to the occasion it will forever be a blot on the escutcheon of Chicago.

Albert B. Hale: In a commercial sense, I would like to ask the cost of the milk recommended by the Milk Commission as compared with that sold by competitors.

Mrs. Plummer replied that the commission could furnish the best milk for ten cents a quart.

Frederick Leusman: I would like to ask whether the milk that is offered for sale by this commission is better than Gurler's certified milk—whether it is better or as good?

Mrs. Plummer: We do not claim that it is better than Gurler's milk. Mr. Gurler's milk is brought in at eleven o'clock in the morning and not delivered until the next morning at about the same time, so that it is from thirty-six to forty-eight hours old before children get it. I have used Gurler's milk, and for the first time it turned sour recently.

William A. Evans: Mr. President—I would like to offer the following resolutions:

Resolved, That the Chicago Medical Society, after deliberate consideration, approves of the work of the Milk Commission of the Children's Hospital Society.

Resolved, That the Chicago Medical Society suggests to its members that they recommend properly inspected milks.

Resolved, That the thanks of the Society and of the community are due the members of this commission.

I move the adoption of these resolutions.
Seconded and carried.

Paper by **Arnold C. Klebs**, on the **Relative Importance to the Community of Pneumonia and Tuberculosis:**

The mortality statistics in this country show a decided increase of deaths attributed to Pneumonia, and this has caused serious apprehension amongst some sanitarians. A study of the statistical material at hand and a comparison between Pneumonia and Tuberculosis seemed to be in order, especially since this latter disease has so far always been considered as the most serious danger to the health of civilized communities.

Before general conclusions are drawn from the mortality figures it is absolutely necessary to analyze the different factors on which they are based. First of all we must hold in mind that the information given by mortality statistics in regard to certain diseases and their importance to the community is extremely limited. "It is," as Dr. **Dickson** says, "the amount and duration of sickness rather than the mortality that tell on the prosperity of a community," or to quote **Charles Dickens**: "It concerns a man more to know his risks of the fifty illnesses that throw him on his back than the

possible date of the one death that must come. We must have a list of the killed and of the wounded, too!"

To judge the disabling power of a given disease it is necessary to analyze its clinical features, its course and the length of period of illness, its infectiousness and curability. Total mortality figures give no information whatsoever on these points.

Furthermore, in analyzing mortality figures and especially in comparing those of one with that of another for a period of years, we ought to be reasonably sure that the recognition of the cause of death in one case is as easy as that in the other. Ill-defined conditions will frequently become the source of statistical errors on account of a lacking uniformity of the nomenclature used by physicians. As **Newsholme** points out: "There appears to be a fashion even in the names of diseases; in one doctor's practice nearly all the deaths from respiratory diseases will be returned as bronchitis or congestion of the lungs, in another perhaps as pneumonia." The prevalent classification of diseases in this country is thoroughly unsatisfactory and gives great possibility for error. The new "International (Bertillon) Nomenclature" will probably bring about a great improvement in this direction. But erroneous certification of deaths arises not only from the ignorance of the reporter, but quite frequently also from the desire to protect the surviving family members from the odium of being considered predisposed to that same disease, which holds good especially in chronic and contagious diseases (tuberculosis, syphilis). That the insurance risks are hereby often considered is only too well known. It is easy to recognize that the certifying physician, in reporting a case of death in which he has not been able to observe the course of illness or only a short period preceding death, will incline to name it in accordance with the description he receives from the relatives, and they of course will mostly always avoid the admittance of a chronic ailment. And he very frequently will, in case of doubt, avail himself of the name of the most notoriously fatal disease, especially if this has been announced as such persistently in the public press.

These considerations show us that the figures for total deaths are subject to variation from other causes than actual changes in their intensity. But the mere statement of total mortality figures alone does never in itself give a measure of the real importance of the disease under consideration. From an economical point of view, at any rate the cases of death at different ages and often also those of the two sexes must be taken into account. It is evident that a disease causing the highest mortality amongst the wage-earners is infinitely more serious to the community than one amongst infants and old people. For us here it may therefore be well to remember **C. Kelly's** admonition: "It is always well to distrust a very low death-rate, and careful inquiry should be made into the age and sex distribution before coming to a conclusion." Moreover, the age distribution is of especial importance in communities where the population is constantly increased by immigration. "The mortality of most

large and growing towns would stand higher than it does but for the large number of young and healthy immigrants from the country (**Newsholme**)." There is unfortunately no method in use by which the effect of migration can be accurately measured.

The calculated ratio between deaths and population, or that between deaths from one special cause to those from all known causes, necessarily opens great possibility for error and especially in communities where the figures giving the total population are subject to great variations and therefore frequently inaccurate. Here in this country especially, population figures are but little reliable, and it is most evident that death ratios, computed on such a basis will give but little trustworthy information. Nevertheless, some information can be gained from the death-rates, but only by a careful consideration of the two composing factors.

From this general standpoint we will now consider the relative importance of Pneumonia and Tuberculosis.

We have first to search in the "list of the wounded" for the relative disabling powers of the two diseases. Unfortunately there are no morbidity statistics at our disposal, at least none based on sufficiently large figures. The clinical observation of hospital patients suffering from these diseases gives us the best basis at our disposal in determining their relative disabling power. Pneumonia and Tuberculosis are essentially different in their clinical course. The first is of a markedly acute type, while the latter's course is eminently chronic. The average length of disabling sickness for Pneumonia does not exceed four weeks, while for Tuberculosis it frequently exceeds fifty weeks. Furthermore, termination in complete recovery in Pneumonia is very frequent, while in a marked case of Tuberculosis it is very rare. This is of course of prime importance in regard to the prophylaxis of these diseases.

The average mortality of Pneumonia cases treated in fifteen different hospitals does not exceed 23.2 per cent, which is quite low, especially when we consider that the hospital receives as a rule the worst cases, that they were usually sent late and that the transportation to the hospital in itself must aggravate the disease. This is well illustrated by reports from military hospitals, where the patients are young and robust and are put under appropriate treatment at once. **Fraentzel** reports 100 cases of soldiers without any deaths, **Andrew Smith** a mortality of 3.5 to 7.5 per cent in military hospitals. The latter author also insists on the distinctly greater mortality in Pneumonia cases in hospitals, as compared to that in private practice.

A tabulation of the results of hospital treatment of Pneumonia, from which the above mortality rate was calculated, is herewith given:

	Per Cent.
Montreal General Hospital (Osler).....	20.4
Massachusetts General Hospital (Osler)....	25.0
New Orleans Charite Hospital (Osler)....	38.0
Boston City Hospital (Osler).....	29.1
Pennsylvania Hospital (Osler).....	29.1

Presbyterian Hospital, N. Y., 458 cases	
(A. Smith)	33.2
St. Thomas Hospital, London (Osler).....	20.0
St. Bartholomew's Hospital, London (Osler) 18.6	
Edinburgh Royal Infirmary (Osler).....	28.8
Vienna General Hospital, 7942 cases (Koranyi)	24.5
Basel Burger Hospital, 922 cases (Koranyi). 23.1	
Stockholm Hospital, 2612 cases (Koranyi). 10.7	
Christiania Gov. Hospital (Winger)	16.8
St. Petersburg Maria Magdalen Hospital (Bary)	21.0
Zurich Hospital, 873 cases (Eichhorst).....	19.8
Average	23.2

These figures speak for a relatively good prognosis in Pneumonia. This is especially so in the otherwise healthy and temperate individual. For the one afflicted with other diseases, and especially for the alcoholic, it becomes much more serious.

Andrew Smith reports his observations of 428 cases of Pneumonia admitted to the Presbyterian Hospital (N. Y.)

Of the markedly alcoholic (36) 70 per cent died, (15) 29 per cent recovered; of the moderately alcoholic (52) 32 per cent died, (109) 67 per cent recovered; of the non-alcoholic (45) 20 per cent died, (171) 79 per cent recovered.

The prognosis of Tuberculosis, on the other hand, as to complete recovery is dubious in every case. True it is that by the institution of a systematic plan of treatment on hygienic-dietetic lines and with a persistent out-of-door life relatively excellent results are obtained, but only when this treatment is begun at an early stage of the disease. The fatality of the disease in well developed cases of Tuberculosis, that is those in which there cannot be any mistake about the diagnosis, is almost absolute, the hospital reports and the opinion of clinicians are unanimous on that subject. And then its greatest number of victims is not amongst the children and the old, but amongst the wage-earners between the ages of 15 and 65.

When we compare the clinical courses of the two diseases we find a still more striking difference. In pneumonia the individual is attacked suddenly without hardly any warning, he is well one day and is profoundly ill the next, he goes through a few days of grave illness and in most instances (except in the cases already cited) he recovers complete health after a comparatively short convalescence. In Tuberculosis the beginning is most insidious, the victim goes through periods of comparative well-being and partial disability, that can go on for years, until, and always amongst bad hygienic surroundings, the period of consumption sets in with all its well-known misery and total disability, which again can be prolonged for years to come, until death comes as a relief.

The comparative infectiousness of the two diseases has also a distinct bearing on their relative importance. In the light of modern research there can be no doubt of their communicability under certain conditions. For Tuberculosis at least this is proven beyond any doubt. For Pneumonia we have in this respect only indirect evidence, since its bacterial etiology

is by no means yet clear. The observation of several Pneumonia epidemics, the spread of the disease through one house and other factors speak for its communicability. The whole course of the disease indicates its infectious character, and still we are lacking definite information as to its mode of communication. We presume, and probably correctly, that the infective germ is contained in the expectoration and in prophylactic efforts we will always bear this in mind. But the fact that outside of a few reported epidemics we have but rare evidence of its spread within one family or from one individual to another, forces upon us the disbelief in its marked infective powers. On the other hand, in Tuberculosis we have been, since 1882, well acquainted with its bacterial cause, so much so that its discovery in the excretions or organs of a victim, in itself and alone insures an absolutely certain diagnosis. The bacillus of Tuberculosis is probably the most thoroughly investigated of all pathogenic microorganisms, we know its biology, its chemistry and its pathogenic properties. That there are still many features of its life history to be investigated does not detract from the fact that it is responsible for the lesions in the animal body, which we know under the name of Tuberculosis, and that the proof for it can be seen almost daily in every bacteriological laboratory as well as in actual life. The spread of Tuberculosis in families is perfectly well recognized and its infective origin beyond doubt, especially since we have recognized that a direct inheritance of the disease is extremely rare. The infectiveness to the community at large has been much exaggerated, and this exaggeration is largely responsible for the very prevalent and unreasonable fear of microbes. But that the possibility for infection is quite great cannot be denied in view of the fact that living germs in great numbers are constantly being given up by Tuberculous patients and that such cases are very numerous, probably much more so than of any other disease. In this regard we must always bear in mind, and Behring's latest researches emphasize it strongly, the possibility of a latent infection (especially in childhood), which may become manifest only after long years. Therefore, the possibility for infection from Tuberculosis must play an important role in regard to preventative measures, although this should always go hand in hand with a due consideration and application of our knowledge that concomitant causes as unhealthy surroundings, unhygienic mode of life, certain occupations, etc., are necessary to bring about a manifestation of the disease.

In speaking of the prognosis in Pneumonia I have already pointed out its great curability, but that should not be taken as speaking for the greater effectiveness of our therapeutic procedures. It is only meant to indicate that the natural termination of the disease is recovery, at least in healthy, robust and temperate adults. For Tuberculosis the same considerations have shown a different result, especially for the well-marked cases. A disease for which permanent recoveries of incipient cases are reckoned at 40 per cent (Statistics of German Insurance Office, 1897-1900), and for which these results

are cited as quite remarkable, cannot be considered as an easily curable disease and its disabling power can furthermore be gauged by the fact that the shortest duration of treatment in the cases from which the above figure was derived was three months, that is total incapacity for that period.

Since the correct diagnosis of a disease has an important bearing on the conclusions one can draw from mortality statistics, this point must also be considered here. In speaking generally of Pneumonia we have always in mind a definite clinical picture, based upon definite pathologic changes, that is the type of the genuine lobar (croupous, fibrinous) Pneumonia, and we necessarily exclude from this the lobular or Broncho-Pneumonic type which, with the former, has only its name in common. Atypical pneumonias and ill-defined pathologic pulmonary conditions, sometimes make a differential diagnosis difficult and great confusion in the nomenclature of Pneumonia is the result, especially since there is no marked etiologic factor to consult. The presence or absence of the Pneumococcus is of no diagnostic importance whatsoever. What I have said above on the impropriety of using data, derived from ill-defined and with difficulty recognizable causes of death, for the purpose of making comparisons applies therefore also to the general term of Pneumonia as such.

In Tuberculosis in its advanced stage, and especially when it approaches its natural termination, the diagnosis is usually made by any casual observer, lay or professional, it offers no difficulty whatsoever, and with the aid of the microscope becomes absolutely exact. There is very little danger that a case of death from Pneumonia will be returned as Tuberculosis, while on the other hand a good number of caseous Pneumonia, or of chronic Tuberculosis with a fatal general exacerbation of the process or a miliary Tuberculosis will be returned as Pneumonia. This is not speculation, but fact, and every consultant can cite such cases out of his practice, not to mention cases erroneously diagnosed for reasons given above. We also know that in certain cases of Tuberculosis, even such of an advanced type, it is very difficult to find the tubercle bacillus, such cases when death occurs are very apt to be returned under some other name.

With these general considerations in mind we may now analyze the figures at our disposal. The Twelfth United States Census for the year ending May 31, 1900, is probably the most accurate national source of information at our disposal. The local (Chicago) information is since 1898 available only in weekly and monthly bulletins, no annual report being issued by the Department of Health since that time, and since several bulletins were not accessible to me, I have asked Dr. Reynolds for the missing figures, which he supplied most readily. The Chicago Bulletins give only very limited information as to age distribution in causes of deaths, there being only stated the total number of deaths at the ages under 1, between 1 and 5 years and over 60 years, leaving out entirely the period of from 5 to 60 years, and it is just this period which interests us primarily

from an economic standpoint. We also do not receive any information as to the number of deaths in the various age groups.

The relative rate of mortality in Chicago in percent of total mortality for Pneumonia, Tuberculosis and Bronchitis for the years 1879 to 1902 is indicated in this chart (I.) It shows for Tuberculosis a marked increase in the years 1882 to 1885, which being coincident with the discovery of the Tubercle Bacillus and the introduction of bacterial diagnosis based thereon, may be due to more correct returns in the certificates of deaths. A decline is then noted until 1891. In other countries (Prussia, *Kaysersing*) we also note in the decline of the Tuberculosis death rate the influence of Koch's discovery in 1882, but it became manifest in 1887 by a very decided decline in the death rate. Not so in Chicago, where we observe a decrease in 1890 to 1891 from about 10.3 per cent to 8.8 per cent, followed immediately by a distinct increase in the following years up to 1898, and slightly declining from there on to 12.3 per cent. This is absolutely different from the experience in other cities in which the death rate has distinctly decreased since about 1887. The curve for Pneumonia on the other hand shows a steady ascent from 1879 to 1891, from about 5.2 per cent to 10.3 per cent, then follows a marked decline to about 6.8 per cent in 1894, followed again by an increase, almost all the figures after 1895 being marked higher than in previous years. It would be most interesting to analyze the real importance of this increase, which for reasons stated is practically impossible. Such analysis being not at hand, the import of these curves has to be taken with a great deal of caution, although they seem to indicate an unusual importance of Tuberculosis and Pneumonia in this community of late years.

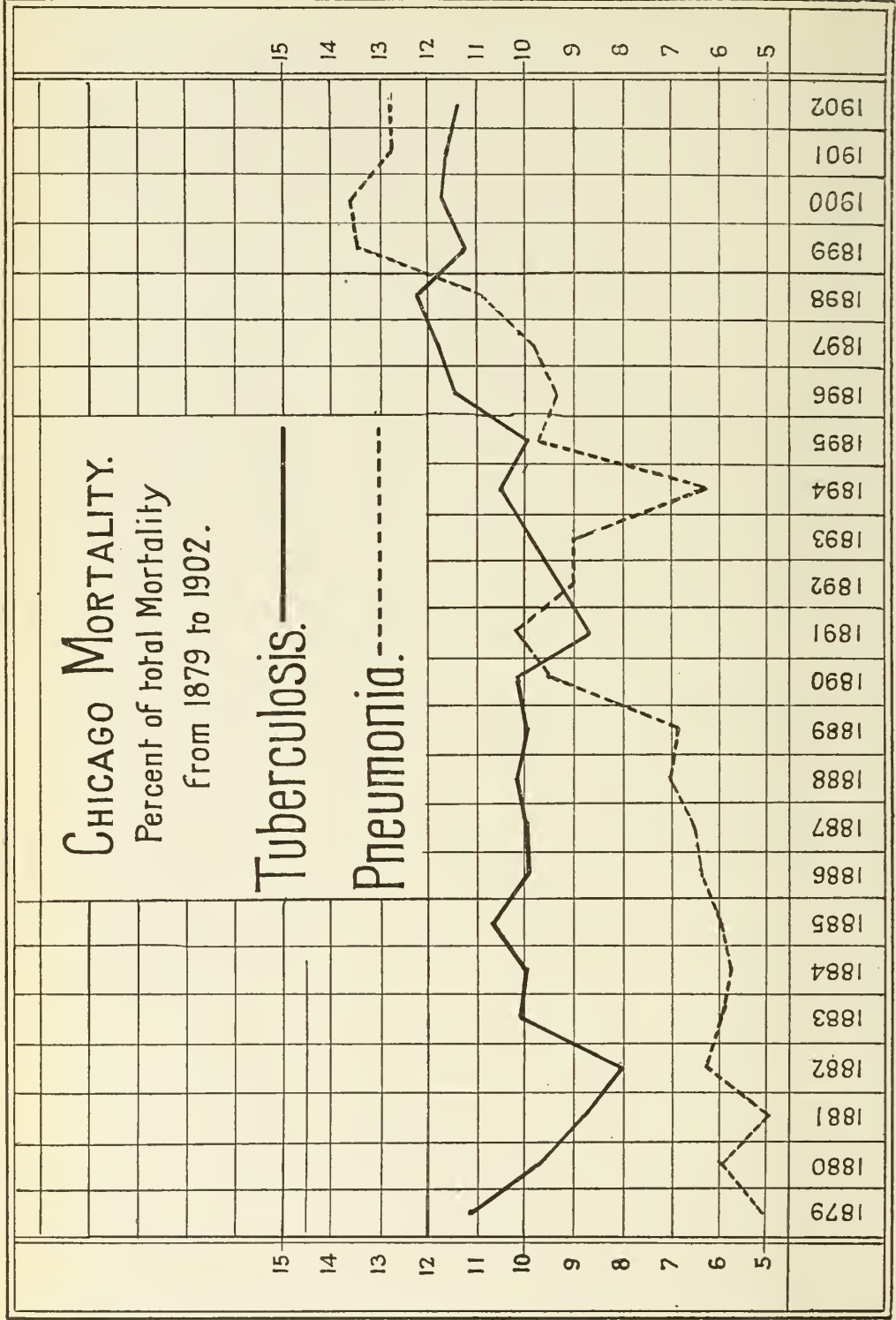
The methods of compilation used by the United States Census Office are perhaps not beyond criticism, but since it allows an analysis of the different basic factors it is for our purposes the best available statistical information and being founded on very large numbers obtained by uniform methods, escapes the frequent fallacy caused by a paucity of data. To what extent the Census Reports of different years are comparable is necessarily a matter of conjecture, and at any rate it is unsafe to go too far back in making comparisons.

The figures for the Twelfth United States Census for the year 1900 are:

	Pneu- monia.	Consump- tion.
Total number of deaths.....	105,971	109,750
Death rate per 1,000 living (Reg. Area)	192.0	187.3
Death rate per 1,000 deaths from all causes.....	106.1	109.9
The corresponding figures from the Eleventh United States Census for the year 1890 are:		
	Pneu- monia.	Consump- tion.
Death rate per 100,000 living (Reg. Area)	186.9	245.4
Death rate per 1,000 deaths from all causes	90.6	122.3

These figures show an increase of the Pneumonia death rates and a decrease of those from

Chart I



Consumption for the two Census years 1890 and 1900.

When we analyze the total number of deaths from Pneumonia and Consumption given in the Twelfth Census as to their distribution in the different age groups and their ratio per population, we receive some interesting information. (Chart II, A and B).

Age Distribution of Total Mortality and Proportion of Deaths from Consumption and Pneumonia at Certain Ages to 1,000 Living at These Ages 12th U. S. Census.*

Age.	CONSUMPTION.		PNEUMONIA.	
	Total number of deaths.	Deaths per 1000 living	Total number of deaths.	Deaths per 1000 living.
Under 1 year ..	2,011	....	19,662	....
1 " ..	1,168	....	9,796	....
2 years..	622	....	4,349	....
3 " ..	375	....	2,189	....
4 " ..	278	....	1,310	....
Under 5 " ..	4,454	0.47	37,206	3.90
5-9 " ..	1,287	0.14	3,322	0.37
10-14 " ..	2,210	0.27	2,042	0.25
15-19 " ..	9,104	1.20	3,474	0.45
20-24 " ..	16,031	2.10	4,326	0.58
25-29 " ..	15,811	2.40	4,077	0.62
30-34 " ..	12,805	2.30	4,065	0.73
35-39 " ..	10,833	2.10	4,532	0.91
40-44 " ..	8,376	1.90	4,431	1.04
45-49 " ..	6,456	1.80	4,400	1.20
50-54 " ..	5,465	1.80	4,700	1.50
55-59 " ..	4,424	2.00	4,566	2.06
60-64 " ..	3,652	2.03	5,198	2.90
65-69 " ..	3,193	2.40	5,325	4.08
70-74 " ..	2,396	2.70	5,156	5.80
75-79 " ..	1,459	2.80	4,170	8.02
80-84 " ..	615	2.40	2,725	1.08
85-89 " ..	214	2.40	1,229	1.30
90-94 " ..	49	2.04	336	1.40
95 and over.	23	2.30	115	1.17

*The age-distribution of the total population given by the Twelfth Census was as follows:

Under 1 year	1,916,892	
1 "	1,768,078	
2 years	1,830,332	
3 "	1,824,312	
4 "	1,831,014	
From 5- 9 "	8,874,123	
" 10-14 "	8,080,234	26,124,985
" 15-19 "	7,556,089	
" 20-24 "	7,335,016	
" 25-29 "	6,529,441	
" 30-34 "	5,556,039	
" 35-39 "	4,964,781	
" 40-44 "	4,247,166	
" 45-49 "	3,454,612	
" 50-54 "	2,942,829	
" 55-59 "	2,211,172	44,797,145
" 60-64 "	1,791,363	
" 65-69 "	1,302,926	
" 70-74 "	883,841	
" 74-79 "	519,857	
" 80-84 "	251,512	
" 85-89 "	88,600	
" 90-94 "	23,992	
" 95 and above	9,770	4,871,861

Total population of United States at known ages 75,793,991.

The chart shows the well understood fact that the greatest mortality from Pneumonia occurs in the two extremes of life, while that of consumption selects chiefly the age period from 15 years upwards for its victims. In the age period from 15 to 60 years the consumption mortality exceeds the one from Pneumonia more than twice, in the extremes of age the mortality from Pneumonia is more than three times higher than that from consumption. But the extreme height of the mortality figures for the ages under 15 from Pneumonia and especially that under 1 year of age induces further investigation. Particularly for the reason that genuine lobar Pneumonia is generally a rare disease in infancy. It is very likely that a great majority of the cases returned as Pneumonia in these ages, died of Broncho-Pneumonia or some other ill-defined disease of the respiratory organs. **Holt** puts the relationship between croupous and Broncho-Pneumonia as 25 to 75 per cent for children in the first two years. **Schlesinger** gives a proportion of 37 to 270 for lobar and Broncho-Pneumonia respectively, in children up to 14 years of age. These figures vary somewhat, but nevertheless speak for the decidedly greater frequency of Broncho-Pneumonia in childhood as compared to that from lobar Pneumonia. Also is the prognosis of lobar Pneumonia in infancy infinitely better than that of the lobular type. **Sturges and Coupland** in their work on Pneumonia state: "It is probable that the smallest mortality from lobar pneumonia at any period of life whatever occurs in early childhood." (Their chart based on an analysis of mortality statistics, 2038 cases, shows a curve ascending gradually through the different age periods from under 1 year to above 70, from under 5 per cent to above 55 per cent mortality.)

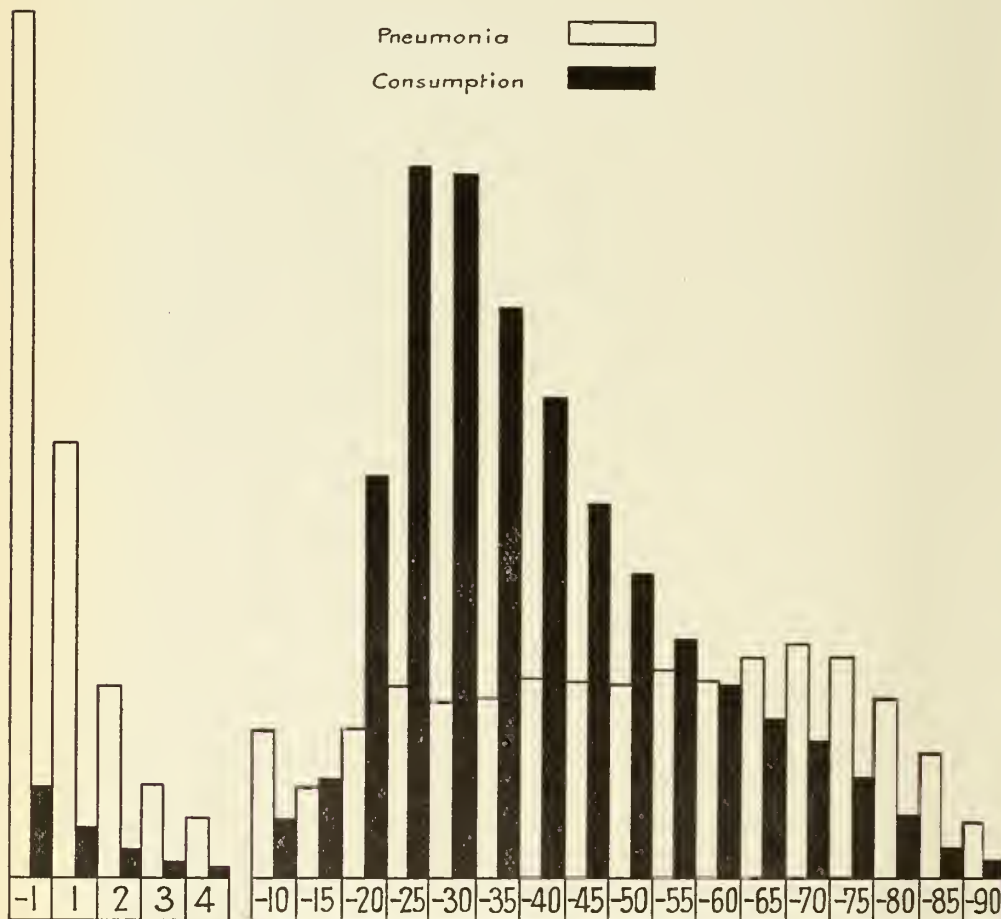
The enormous mortality from Pneumonia for childhood given in the Census can therefore be only explained by the assumption that the greater proportion of these cases did not die of genuine lobar pneumonia, but to the greater extent were due to broncho-pneumonia and capillary bronchitis. This is quite plausible since we know very well that the diagnosis of lobular pneumonia is one of the most difficult tasks in pediatrics, that is, its differentiation from other pulmonary affections, the line of demarcation between all these catarrhal conditions being very indistinct. On the other hand lobar pneumonia is mostly a very typical disease with sudden onset and not secondary to bronchitis, measles, whoopingcough, etc. But as long as we have no distinct etiological factor which we can utilize in differential-diagnosis of the two affections there will necessarily be considerable confusion in the returns of deaths from these diseases and the general death-rate attributed to Pneumonia will be unproportionally swelled.

In emphasizing these facts I do not ignore the great importance of the high mortality in childhood from respiratory diseases, it certainly merits the fullest attention of sanitarians, only I wish to show that lobar (fibrinous) Pneumonia (and that is what is generally understood by the term Pneumonia) plays only a very inferior role in these mortality figures and that a clearer

Chart II. A.

Age Distribution of Total Mortality FROM PNEUMONIA and CONSUMPTION

12th U.S. Census Reports for 1900, Table 8 pgs. 230 & 232



nomenclature would make us much better acquainted with actual conditions.

In further analyzing the chart (II, A and B) we see that for the successive decades (from 15 to 60) the mortality from Pneumonia is fairly uniform, and that it becomes somewhat higher for the following fifteen years, very markedly so when analyzed in relation to the number living at those ages (B). Taking into consideration the fact already alluded to that the prognosis of Pneumonia in adult age is quite favorable and that the greatest percentage of deaths is amongst those individuals affected by other

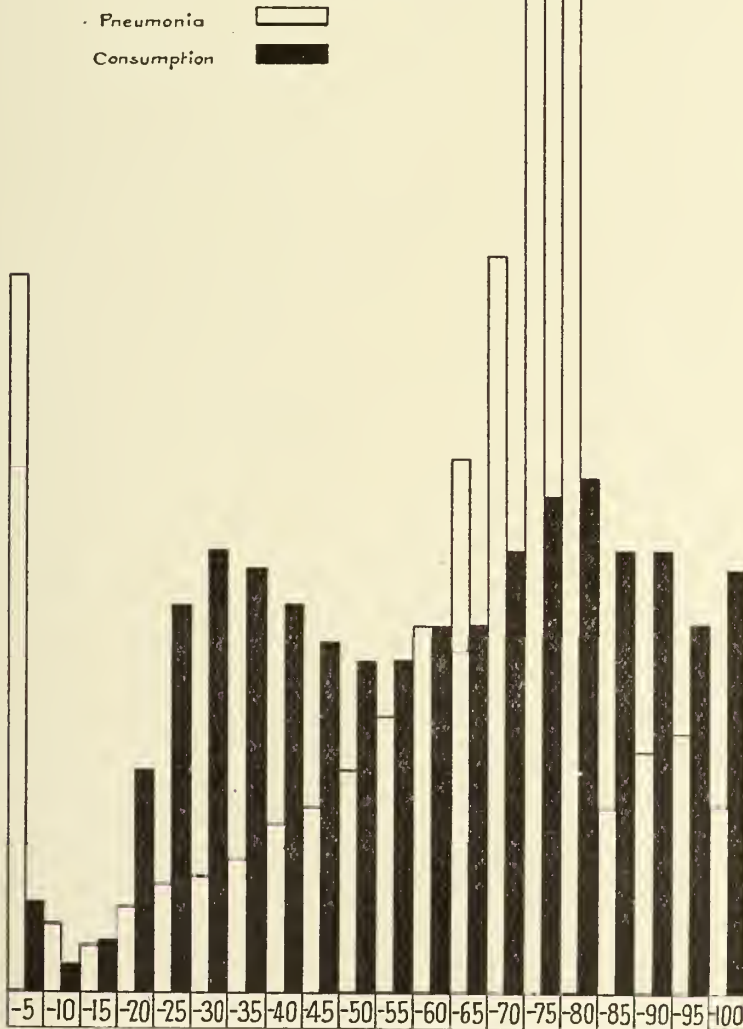
(chronic) diseases and especially amongst alcoholics, we may safely conclude that the great majority of individuals dying of pneumonia at this age belong to this class. This is most important from an economic and prophylactic point of view. Individuals suffering from heart and kidney diseases and the alcoholics as well as those between the ages of 70 and 80 belong to the "economically weak," their importance to the prosperity of a community is relatively small and this holds especially for the alcoholics. A wise but energetic action against the excessive use of alcohol will probably have a

Chart II·B·

Proportions of Deaths
FROM
PNEUMONIA & CONSUMPTION

of certain ages to 1000 living at those ages .

12th U.S. Census Reports Vol. I & IV.



marked bearing on the mortality from Pneumonia, much more so than general hygienic measures, which as far as our present knowledge goes, has only an indirect influence on the mortality of the disease. The very fact of an increasing mortality from Pneumonia in late years when general hygienic conditions have steadily improved would disprove the efficiency of such a course of prophylaxis.

When we now glance at the corresponding figures for consumption during the adult period, and when we consider the length of the preceding disabling sickness and that it is quite within the range of permissible theory that even these high figures underestimate actual conditions for reasons already given, we can draw only one conclusion, that is, that the two diseases in their relative economic importance to the community can hardly be compared.

The Proportions of Deaths from Consumption and Pneumonia at Each Age per 1,000 at Known Ages from These Diseases, 11th and 12th Census 1890 and 1900.

Age.	Consumption.		Pneumonia.	
	1900.	1890.	1900.	1890.
Under 1 year ..	18.3	18.3	196.1	150.7
1 " ..	9.4	10.3	106.5	82.5
2 years..	5.0	5.0	44.8	37.0
3 " ..	3.6	3.1	22.1	20.8
4 " ..	2.2	2.4	13.0	12.8
5-9 " ..	10.6	9.9	28.0	29.0
10-14 " ..	17.1	18.9	11.8	13.0
15-19 " ..	70.6	78.7	19.2	28.1
20-24 " ..	136.7	142.2	30.4	43.2
25-29 " ..	153.7	149.0	35.5	49.7
30-34 " ..	132.7	124.7	37.6	49.8
35-39 " ..	113.6	102.5	43.9	53.0
40-44 " ..	82.0	78.8	40.1	49.2
45-49 " ..	67.0	65.4	40.6	53.2
50-54 " ..	50.0	50.4	44.7	51.9
55-59 " ..	39.5	40.1	46.0	49.5
60-64 " ..	31.4	34.7	51.5	51.8
65-69 " ..	25.8	27.8	52.9	50.5
70-74 " ..	17.5	17.7	50.5	43.4
75-79 " ..	11.2	11.9	40.4	37.9
80-84 " ..	4.4	5.2	27.2	24.9
85-89 " ..	1.6	2.0	12.1	11.6
90-94 " ..	0.3	0.4	3.5	4.1
95 and above	0.1	0.2	1.0	1.01

But we will furthermore analyze the nature of the increase and decrease of the death-rate of the two diseases. The chart (III. A and B) gives the ratios of mortality from Pneumonia and Tuberculosis, respectively, for the two Census years 1890 and 1900, arranged as to the different age-groups. Again we see a similar distribution of the figures at the age-periods, as that given by the total mortality figures. We further note that the greatest increase in the death-rate of Pneumonia has taken place in the period under five years of age, and also, but to a lesser extent in the period above 65 years. On the other hand, we note a quite ap-

preciable decrease in the age-period from five to 65 years.

For Consumption we note that the death-rate in the two years has remained about stationary for the period under 9 years of age, has decreased some from 10 to 25 years and from above 50 years, but that for the age period of from 25 to 50 years there has been an increase.

These figures are, of course, only comparable with the restrictions already alluded to. However, the marked increase of the death-rate of Pneumonia amongst children under 5 years of age, which is so large responsible for the apparent general increase in the death-rate from this disease, must command attention, and it would be valuable to investigate the factors responsible for the increase, which for reasons stated above, cannot be due to a greater mortality from lobar Pneumonia. On the other hand, we have again an illustration of the fact of the overwhelming prevalence of deaths from Consumption in the most active age-period of life.

In summing up, we must come to the following conclusions:

1. That the relative economic importance of Pneumonia and Tuberculosis cannot be estimated by a mere comparison of total mortality figures for each disease.

2. That the high mortality figure and its increase of late, for Pneumonia is produced by the enormous death-rate and its increase attributed to this disease, in early childhood.

3. That, therefore, the high mortality from Pneumonia and to a certain extent its increase is due to a classification of different ill-defined pathologic conditions under one name, while that from Tuberculosis represents that of a well-defined morbid entity.

4. That for this reason and on account of the relative shortness of disabling sickness and frequent recovery in Pneumonia, the great length of disabling sickness and infrequent recovery in Tuberculosis, the relative importance of the two diseases is so vastly different, that a comparison on economic grounds reveals the overpowering danger from Tuberculosis.

5. That the steady decrease of the Tuberculosis death-rate can be explained on the grounds of increasing improvement of hygienic conditions in late years and as the result of specific prophylactic measures.

6. That the increase of the Pneumonia death-rate occurring in a time of improving hygienic and sanitary conditions and of a general application of antiseptic principles, shows its independence of these features.

7. That, therefore, and in view of the still enormous mortality from Tuberculosis, its demonstrated preventability and the possibility of its arrest only in its earliest stages, the institution of educational measures in regard to personal and public hygiene widely and specifically applied, for the prevention of this disease, seem to be distinctly indicated.

8. That since for pneumonia, as pointed out by E. F. Wells, "the fundamental information on which prophylactic rules may be formulated is not yet at hand," this subject needs further investigation from a bacteriological and epidemi-

Chart IIIA

1890-1900

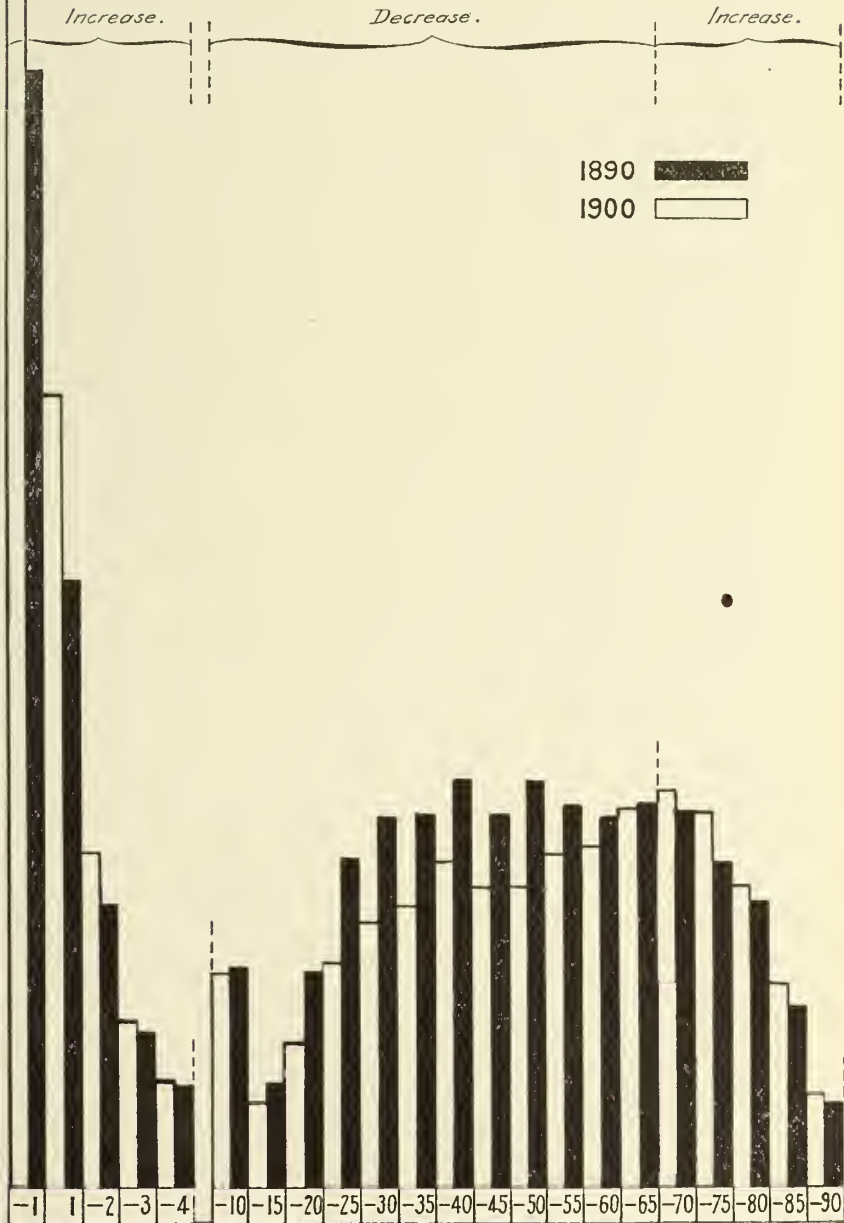
The Age Distribution of.

PNEUMONIA MORTALITY

Proportions of Deaths at each age per 1000

at know ages from PNEUMONIA .

12th U S Census Reports Vol. III 1902 pg CCXX.



ological standpoint as well, before "exaggerated and irrational notions in regard to its dangers and its avoidance" are communicated to the public, which in view of the facts given are out of all proportion.

Discussion.

Homer M. Thomas: It is refreshing to have refuted the claims of the Chicago Health Department, that pneumonia is now "the captain of the hosts of death."

I recently gave a paper before the State Board of Charities, at their annual meeting in Quincy, Ill., on the **Economic Loss to Illinois from Tuberculosis**, and hence had to thoroughly investigate and ascertain the probable number of cases of tuberculosis at the present time. I estimated that there were at the present time in Illinois, from 16,000 to 20,000 cases of tuberculosis. This total was secured in the following way. There exists in the State of Illinois, authentic records of a death rate from tuberculosis of 8,000 deaths during 1901. This death rate in all probability is entirely too low a number, as many cases dying from tuberculosis are not reported as such, for self evident reasons. In the State of Illinois, there are 102 counties and 1620 townships. In Cook County alone, there are only 27 townships, and the population of Chicago, is at least 2,100,000. It is entirely fair to assume that there are at least 10 cases of tuberculosis in every township. This would represent a total of over 16,200 cases of tuberculosis in the State of Illinois, at the present time. In all probability 20,000 cases at the present time, would more nearly approximate the truth. It does not seem possible that the wildest and most imaginative statistical mind could estimate that there are from 16,000 to 20,000 cases of pneumonia in the State of Illinois, at the present time. The economic phase of this question naturally comes to the foreground when we consider the relative value of the lives that may be lost from tuberculosis and from pneumonia. If we have 10,000 deaths from tuberculosis every year in the State of Illinois, what is the approximate economic loss to the State from these lives? This must be considered from the standpoint of the least possible value that could be placed upon an individual life. It will cost at the very lowest calculation, two dollars a week to raise a child to the age of fifteen years. This is much below what the actual expenditure would be. A child's life then would be worth at the age of 15 years, \$1,500, and 10,000 lives would be worth \$15,000,000. Thus, we have an annual economic loss to the State of Illinois, from tuberculosis of \$15,000,000. The deaths from pneumonia will range from one to five years of age, relatively, or from fifty-five to sixty years of age. The deaths from tuberculosis, as a rule are in the most productive period of the individuals life, namely from fifteen to forty years of age. It therefore, follows that the relative importance to the State, considered purely from a standpoint of economic loss, is vastly in favor of tuberculosis as against pneumonia. There can be no escape from this conclusion. I heartily concur in the opinion of the essayist, as to the relative importance of these diseases being markedly in favor of that of tuberculosis.

Frank S. Churchill: I am particularly interested in the chart which represents all deaths from pneumonia under one year of age. To my mind what that chart really means is that a great many of the cases upon which it is based were undoubtedly cases, not of lobar but of broncho- or lobular pneumonia, which were probably secondary to some of the infectious diseases, or, to some of the intestinal troubles which are so frequent at that time of life, and which we know are complicated with lobular pneumonia. Furthermore, I venture to say that a certain number of these cases were probably of the tubercular variety. In other words, they were cases of tubercular broncho-pneumonia, and that is what this line is based on. The number of cases of croupous pneumonia in infancy is comparatively few and the mortality is very low. Personally, I never worry over a case of lobar pneumonia in a child, except it be an extreme case, which cases are fortunately very exceptional. Most of the cases are so mild that one need not worry over them. Hence, as the discussion is upon the relative importance of lobar pneumonia and tuberculosis, there can be no doubt as to the effects of the two maladies in early life, so much more frequent and disastrous are cases of tuberculosis. These little patients are not of course wage earners or producers at present, but they do represent much potential energy and any condition which destroys them is well worthy of most careful study and in the crusade against tuberculosis I would urge that its ravages among infants and children be not overlooked.

Dr. Klebs (closing the discussion): I agree with what Dr. Wells has said absolutely, that a good deal depends on the standpoint in comparing the two diseases. I have indicated my standpoint in the title of my paper, namely, the relative importance to the community of the two diseases. That is their economic importance. I do not wish, as I stated in my paper, to minimize the importance of pneumonia. It is most important from every standpoint, but I tried to point out in my paper that the nature of the increase of pneumonia had better be more thoroughly studied. I have given you the distribution of the mortality figures from this disease as to ages, showing that the subject needs further investigation. The statistics for pneumonia need to be studied more thoroughly than I have done it, I have attempted it only in one direction. It is very necessary to determine the morbid process in the returns of deaths from pneumonia. I have shown you that there must be not only one cause of death, but perhaps three or four, returned as pneumonia.

As to the Bulletin of the City Health Department, in that Bulletin comparisons have been drawn between the two diseases. The Bulletin has undertaken comparisons between the two diseases since the beginning of this year when Dr. Reynolds read, I think, in Detroit, a paper on the "Pneumonia Problem." Since these comparisons were misleading in many respects, I thought it timely, on account of the interest which the public has taken in this matter, but not against the Health Department, to point out and show exactly how these figures were dis-

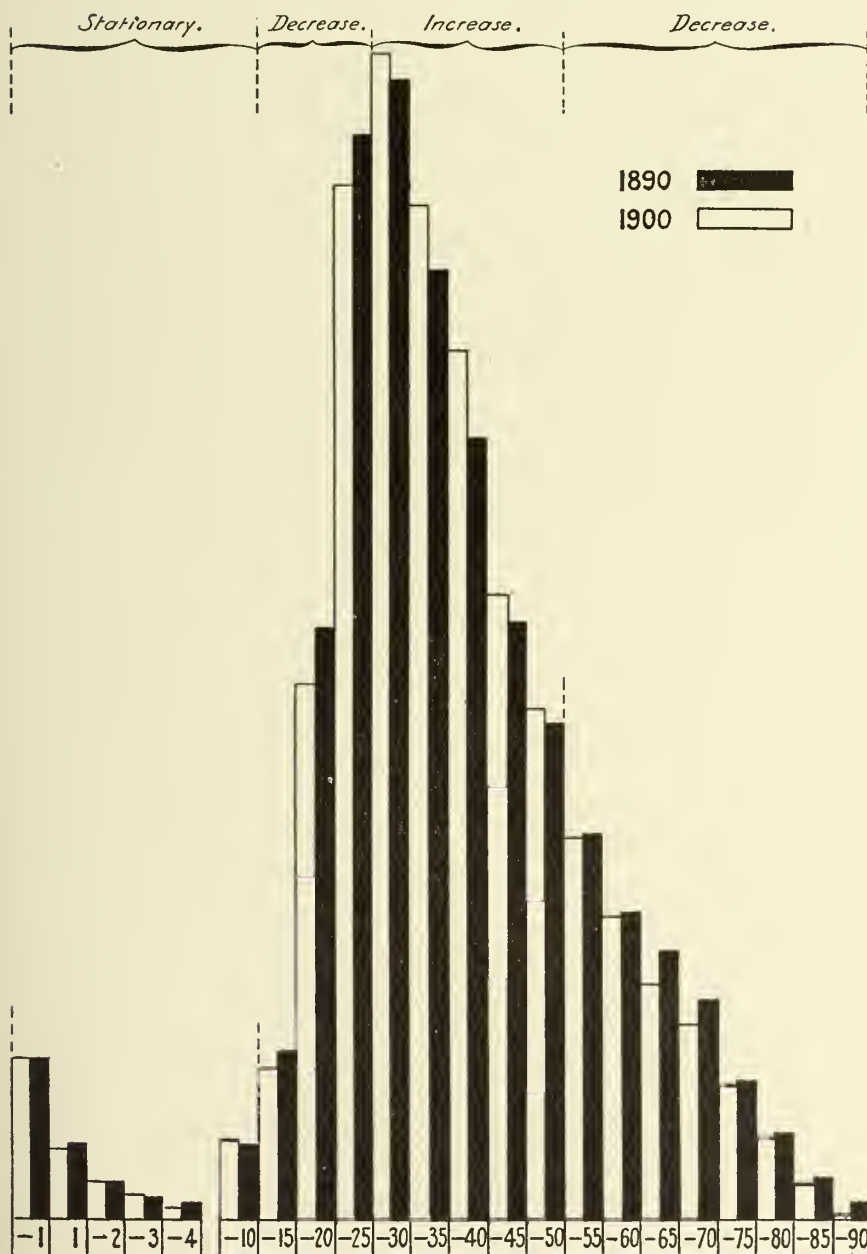
Chart III B.

1890-1900

The Age Distribution of
CONSUMPTION MORTALITY

*Proportions of Deaths at each age per 1000
 at known ages from CONSUMPTION.*

12th U.S. Census Reports Vol. III 1902 pg. CLXXIX.



blue, and when dry is mounted in Canada balsam.

If the organism had been selected at the right time and the staining process has been properly carried out, you will now have the most beautiful tubercle bacillus imaginable. It will appear a bright red in the interior of a fine large globe, almost or quite as transparent as crystal. The clear globe, with its bright red bacillus, is seen against a deep blue background, presenting a picture more beautiful than any to be seen in all the field of pathological anatomy. It is the perfectly developed organism in its natural habitat. The giant cell and the bacillus of tubercle are the parasite—the captive—and their mode of life is shown in the degenerate forms of the tuberculous focus. Each of the spores that give the bacillus its beaded or granular appearance may develop into a sporocyst, and each megaspore that may form within the sporocyst develops into an adult animalcule similar to the one that produced the ovum, thus completing the life cycle of the organism.

The ray fungus of the sphere may form a streptococcus, may produce a bad acute inflammation of the throat, as a bacillus may sour milk. The adult *P. A.* produces a staphylococcus. Other striate infusoria have a life history somewhat similar to *P. A. e. g.* *Tracheo-locerca Olor*, *Otostoma*, *Colepsi Hirtus*, etc.

The Secretary was instructed to arrange at the Hospital office, that members in attendance could receive telephone calls while at the meeting.

On motion by S. G. West, future meeting time is 8:30 p. m., instead of 9.

A pleasant smoker was held.

Adjourned, to meet November 19.

J. J. Alderson,

Official Reporter.

Stock Yards District Medical Society.
Regular meetings are held on the first and third Thursdays of each month at Weller's Restaurant, 4127 Halsted st., at 9 p. m.
Membership 50.

Officers.

Secretary.....R. J. Tivnen, 302 Garfield Blvd

The Stock Yards District Medical Society held their first meeting of the winter session Thursday evening, October 22d, at 4127 Halsted street. The report of the Secretary showed that during the past year thirteen meetings were held, with an average attendance of twenty-four. The programs comprised: clinical, four; symposia, two; papers, seven; and were, with one exception, contributed by the members themselves. The program of Thursday evening was clinical.

T. J. Sullivan presented a case of a Wagner osteoplastic resection of the intact cranium, and J. C. Hepburn a case of rodent ulcer involving contents of orbit requiring enucleation, recovery under X-ray treatment, and a case of compound commuted fracture of tibia and fibula, upper third.

The outlook for the present year is very encouraging. The "faithful" of the past year are as enthusiastic as ever and new material is becoming interested.

Weller's restaurant, 4127 Halsted street, has been secured as the permanent meeting place, and the original custom of serving a light lunch at each meeting will be continued. The annual meeting will be held at above mentioned place, Thursday evening, November 5th, at 9 o'clock.

Program: Tuberculosis of Mammary Gland, Operation, Report of Case, T. J. Sullivan.

The annual election of officers and other important business will be transacted. The physicians of the district are cordially invited to be present.

Richard J. Tivnen,

Secretary.

Chicago Pediatric Society.
Regular meetings held in Schiller Hall, the third Tuesday of each month from September to June, at 8 p. m. Membership 40.

Officers.

Vice President S. J. Walker, 36 Washington st
Secretary Emma M. Moore, 6025 Prairie ave

A clinical meeting of the Society was held in Schiller Hall, November 17th, with the Vice-President, S. J. Walker, in the chair. The minutes of the annual meeting and those of the October meeting were read and approved.

Program: Dr. J. C. Cook presented three cases:

1. A post-operative case of **Hydrocephalus and Spina Bifida** in child 2½ years. A. H. Ferguson discussed the case and explained his method of operation. In connection with this case Effie Lobdell gave a short report of a case of Spina Bifida, with the operation resulting fatally after five days, the most remarkable characteristics being rise of temperature and general edema.

2. Case of **Dactylitis**. In the discussion there was a diversity of opinion as to the aetiology, whether tubercular or syphilitic.

3. **Haemophila** in boy of 14 years. The first appearance being at the age of 3 months, caused by slight bruise on dorsal surface of hand. The next haemorrhage of any consequence was the result of a series of bumps and bruises on the right side of the head. A large infusion resulted, and after being opened the haemorrhage was so severe that his life was despaired of for many days. When 3 years of age he injured his eye, which became so swollen that the ball protruded from the socket, and did not return to normal position for several months. He has been blind in this eye ever since, though it is probable that the sight was impaired previous to the injury. Since then haemorrhages have occurred from time to time, from slight injuries, such as extracting teeth, scratches and abrasions of the skin, and particularly effusions into the knee joints, resulting in an inability to put

the heels to the floor when walking. The family history is negative.

Julia D. Merrill presented an interesting case of **Congenital Hemihypertrophy**.

A case of **Acute Chorea** and one of **Acute Anterior Poliomyelitis** were reported by J. W. Vanderslice.

The name of E. M. Conner was recommended for membership.

 ♦♦♦♦♦ The Northwest Branch. ♦♦♦♦♦
 ♦♦♦♦♦

Regular meetings are held the first Friday of each month at 8 p. m., at Schoenhofen Hall Restaurant, cor. Milwaukee and Ashland avenues. Membership —.

Officers.

President.....M. H. Luken, 587 W. North ave
 Secretary.....L. J. Pritzker, 418 W. Division st

The Northwest Branch of the Chicago Medical Society held an exceptionally well attended regular monthly meeting on Friday, November 6, 1903, at 8:30 p. m., at its usual meeting place, with President M. H. Luken in the chair.

The first paper was **A Microscopical Demonstration of a Pacinian Corpuscle in a Pancreas**, by Edward C. Seufert:

This microscopical slide is that of a Pancreas containing a beautiful transverse section of a Pacinian Corpuscle.

The latter is situated right in the middle of a lobule. It is round in shape and is made up of about thirty-five or forty concentric lamellae. These lamellae are composed of white fibres, rather loosely woven, between which is found a small amount of lymph containing a few leucocytes. The lamellae are covered on both surfaces by a layer of endothelial cells. Between two consecutive lamella there is found an interlamellar space also containing lymph. The axis of a corpuscle is occupied by a core, consisting of a semi-fluid, granular substance, in the periphery, of which oval nuclei are said to be found.

These Pacinian Corpuscles are sensory nerve endings of the encapsulated variety and form the peripheral stelodendria of dendrites of peripheral sensory neurones. The cell bodies of such neurones are found in the spinal and homologous cranial ganglia.

Usually one large medullated nerve-fibre goes to each corpuscle. The fibrous tissue sheath of this nerve-fibre becomes continuous with the outer lamellae of the capsule. The medullary sheath accompanies the axis-cylinder through the concentric lamellae until the core is reached, where it disappears. The naked axis-cylinder usually passes through the core to its distal end, where it divides into three, four or five branches which terminate in large, irregular end discs. The axis-cylinder may, however, divide soon after it enters the core into two or three or even four branches, these passing to the distal end of the core before terminating in the end-discs above mentioned. Both Retzius and Sala state that the naked axis-cylinders, after entering the core, give off numerous short side branches, terminating in small knobs, which remind these observers of the fine side branches

or thorns seen on the dendrites of Purkinje's cells and of the pyramidal cells of the cortex, when stained after Golgi method. A small arteriole enters the corpuscle with the nerve-fiber, dividing into capillary branches found between the lamellae of the capsule.

The Pacinian Corpuscles have a wide distribution. They are numerous in the deeper parts of the dermis of the hand and foot, and also near the joints, especially on the flexor side. They have been found in the periosteum of certain bones and in tendons and intermuscular septa, and even in muscles. They are further found in the epineurial sheaths of certain nerve trunks and near large vessels. They are quite numerous in the peritoneum and mesentery, pleura and pericardium. In the mesentery of the cat, where these nerve endings are large and numerous, they are readily seen with the naked eye as small pearly bodies.

Last May, Emil Ries showed a Pacinian corpuscle in an inguinal lymphatic gland before the Chicago Medical Society, an anomaly which has not been previously reported.

A paper on **The Uterine Curette as a Therapeutic and Diagnostic Agent**, was presented by Louis J. Pritzker. It was discussed by Drs. Martin, Wagner, Bearard, Fowler, Luken and Pritzker:

In selecting this theme for my essay it was my aim to present before this Society a subject of sufficient practical and general interest to arouse discussion.

The curette in its large and varied field of usefulness is brought into play by the general practitioner in his daily rounds, or by his consultant, almost as frequently as is the lancet or the stethoscope.

We curette to remove the debris left in the uterus after an incomplete abortion; to scrape away hypertrophied or hyperplastic endometrium, granulation tissue or fungous growths.

In properly selected cases of scanty or suppressed menstruation we curette to re-establish the normal catamenial function, and to obtain diametrically opposite results we curette in some cases of menorrhagia or metrorrhagia in order to control and regulate excessive menstruation.

By causing depletion of the uterus, and, indirectly, of its adnexa, thereby reducing congestion and, incidentally, relieving pelvic and ovarian tendencies, the curette proves a friend in need.

The depletion and mechanical stimulation produced by the curette, aided by thermal stimulation with hot intrauterine irrigations, and that followed by a chemical stimulus such as results from a swabbing of the organ with a mixture of equal parts of tincture of iodine and carbolic acid will reduce to normal involution a heavy sub-involuted uterus.

No one remedy, with the exception of diphtheria antitoxine, is known to give uniformly good results in every instance; and this fact encourages me to venture the assertion that, in securing firm contraction of and restoring tone to the uterine muscles by means of the stimuli above described, it is possible in some recent cases of uterine flexion or displacement to restore that organ to its normal position and attitude provided, of course, that its supports are

not too extremely relaxed and that such etiological factors as constipation and increased intraabdominal pressure are removed.

In this connection I wish to report, first the philosophy that lead up to it, and then a little experiment of mine. It is a well known fact that hot water irrigations of the uterine cavity will in many instances check postpartum hemorrhages.

On the other hand, ice applied to the epigastrium or, better still, introduced into the cavity of the uterus will give precisely similar results.

The explanation of this is that each agent imparts tone to and produces contraction of muscle fibres. Now then, inasmuch as the two stimuli are thermal opposites, the alternate use of each must not only prolong, but also intensify the action of the other.

Our great Gastro-intestinal specialists were the first ones to see that point and, as a result **alternate hot and cold water enemesis today one of the recognized modes of treatment in cases of constipation due to atony of the intestines.**

I took this hint from them, and tried it on the relaxed, atonic, retroflexed uterus after thoroughly dilating and curetting it. My results were sufficiently encouraging to warrant further experimentation and to conscientiously recommend a trial of the plan.

In cases of sterility due to stenosis of the cervix and os-externum with dysmenorrhoea and a chain of pathological conditions resulting from such a state, pregnancy often follows dilation and curettement and, I also obtained many favorable results from the use of the curette, followed by other appropriate treatment, in cases of habitual abortion due to chronic endometritis with profuse leucorrhoea.

As a diagnostic instrument, the curette is made use of principally to scrape away bits of tissue intended for further examination under the microscope.

It has been my extreme pleasure and privilege to curette for and with a number of my medical friends. The operation is very simple, yet, often a slight error in its technic, may result in failure and necessitate a repetition of the operation.

I shall not burden you with a description of the ordinary curette itself, further than to say that it is made of various shapes, sizes and degrees of sharpness.

There is one particular curette, however, to which I wish to call your special attention. It is the safest and most reliable curette for the removal of retained or adherent placenta, secundines or thickened decidua.

Before proceeding further I wish to pacify you with the assurance that I am not about to advertise any particular make or maker, for the instrument is unobtainable in any shop at any price.

I refer to the trained finger of the operator. As a rule I use the left index finger or left index and middle fingers. The right hand is made to grasp, through the epigastrium, the uterine fundus in order to steady that organ and to push it over the finger within it; while the left finger or fingers do the curetting. Occasionally

particles of placenta or secundines are found so firmly attached that the finger proves inefficient for its successful removal; in that event the operator's right hand is replaced by that of an assistant. He then takes a dull or semi-sharp curette in the hand thus liberated and, guiding it along his left fingers, introduces it into the uterus and then scrapes away the offending tissues, under the watchful guidance of his left finger.

At the conclusion of the operation the uterus is irrigated and packed with gauze, which acts both as a tampon to guard against hemorrhages and as an efficient capillary drain.

A great deal has been said lately, both pro and con, with reference to curetting in cases of puerperal septicaemia and sapraemia. I do not advocate the indiscriminate use of the curette; and where the uterus is empty there is certainly no indication for its use; but given a case of puerperal infection, with decomposing animal matter in the uterus, furnishing a richly fruitful soil for the development and multiplication of saprophytic germs, the indications are clear—**remove the cause.** It is justly argued, that the metallic curette, by causing abrasions, opens new avenues for septic absorption in these cases, and its use should therefore be condemned in the strongest terms possible.

But it is right here that the finger, gently and dexterously used, finds its most important indication, both as an exploratory instrument as well as a curette. The reflow catheter may here supplement and accompany the finger in order to wash away loose particles of decayed tissue.

In Post-Partum cases of adherent placenta, I usually introduce the entire hand into the uterus and find it safer and more serviceable than any placental forceps.

In non-puerperal cases the sharp or semi-sharp curette is indicated.

To obtain good results here as everywhere in surgery, the work must be most thorough. The safe-guards against failures or accidents are **thoroughness tempered by gentleness**, and above all, **experience.**

The curette is contra-indicated in pelvic inflammations with or without suppuration, pelvic adhesions, and in some cases of septicaemia.

It is not within the scope of this paper to give a detailed description of the operation, the instruments used, their sterilization nor the surgical preparation of the field of operation, the operator or his assistants.

Excellent articles dealing with these details may be found in every text book on gynecologic technic.

I do wish to state, though, that for an anti-septic I usually rely on solutions of corrosive sublimate almost entirely, and, arguments to the contrary notwithstanding, even within the uterine cavity, following it up with sterilized water or a semi-normal salt solution.

The committee on by-laws reported that they had drawn up a set of by-laws, which, after reading, paragraph by paragraph, was taken up and separately acted on by the members present. The by-laws, as modified and finally

adopted, will appear in the next issue of the Illinois State Medical Journal.

Motion by H. W. Berard to hold elections of officers at our regular meeting in December, carried.

The committee on entertainment reported on the progress of their work, and on motion by H. W. Berard were given full power to act in any way they deem necessary to make a success of the proposed banquet.

Louis J. Pritzker,
Official Reporter.

Chicago Surgical Society.

Regular meetings held in Schiller Hall, the first Monday of each month from October to June at 8 p. m. Membership —.

Officers.

President E. Wyllys Andrews, 100 State st
Vice President M. L. Harris, 100 State st
Secretary A. E. Halstead, 2937 Indiana ave
Treasurer D. N. Eisendrath, 3125 Michigan ave

A regular meeting was held November 2, 1903, with President E. W. Andrews in the chair.

Tuberculosis of the Knee.

Wm. Hessert showed a young man who had been suffering since childhood with a tubercular knee. Patient had been treated for years by different physicians without avail. He had all the classic symptoms of a typical tubercular knee. A typical resection was performed. The result was excellent, with shortening of a little more than an inch.

Umbilical Hernia.

He showed a patient upon whom he had operated for umbilical hernia. The woman had been suffering for nearly thirty years from this hernia. At first the hernia was small, but of late it had assumed enormous proportions and was irreducible. The patient submitted to operation and the author performed a typical Mayo operation. The woman recovered.

Appendicitis with Severe Complications.

The author's third case was one of appendicitis with the usual typical history. After opening the abdomen it was found that the appendix had ruptured, and the stone had escaped into the free peritoneal cavity not far from the appendix. The usual operation was performed. The complications were retrocecal abscess; circumscribed empyema on right side; abscess of right lung which broke into a bronchus, and a second circumscribed empyema on the right side anterior to the first cavity. The patient was treated for these complications.

A. J. Ochsner said that everyone who operated upon umbilical hernia up to six years ago, before the present method advised by Mayo, knew that there was danger to the patient from edema of the lungs or pneumonia. A large proportion of such cases had a recurrence. With the present Mayo treatment, neither of the conditions named occurred, and the operation was safe and resulted in a permanent cure.

He had used the operation in over thirty cases, with excellent results.

Wm. E. Morgan said that the result in Dr. Hessert's first case had been largely governed by his careful observation and frequent examinations of the patient after primary drainage. The fact that there had been previously an empyema, and an abscess of the lung on the same side, and the further fact that another focus of empyema on the same side was found, showed great diagnostic ability.

Case of Interscapulo-Thoracic Amputation for Sarcoma of the Scapula.

A. E. Halstead exhibited a patient upon whom he performed this operation. Dr. Halstead performed the Paul Berger operation, and mentioned its steps. He said the tumor had been examined microscopically and was found to be a mixed giant and spindle cell sarcoma. The patient suffered no shock from the operation, was up on the third day, and left the hospital at the end of ten days. The wound healed by primary intention.

Arthur Dean Bevan had done three of these operations. The first case in which he performed this operation was carefully gone over by himself and other physicians. The man presented himself with a tumor situated at the upper end of the humerus, and careful examination was made to determine if there was any primary focus anywhere else in the body. No such focus having been found, the conclusion was reached that it was a case of primary sarcoma of the humerus. An amputation was made on the strength of that diagnosis. Histological examination showed that it was a carcinoma. The patient died four or five months after the operation with symptoms of enlargement of the prostate, although he was only forty-five years of age. Examination showed primary carcinoma of the prostate, and that the bone tumor was secondary to it.

He narrated the particulars of two other interesting cases, in one of which the tumor was a secondary carcinoma.

He said surgeons must be careful not to do what he had done twice, namely, to amputate the entire upper extremity for secondary carcinoma. From his limited experience, many of the cases were secondary carcinomas, having a small primary focus elsewhere. He thought it wise to remove the entire clavicle, to guard against a possible recurrence.

A. J. Ochsner had done the operation twice, once in 1892, for sarcoma of the shoulder involving the entire joint. The patient remained well after eleven years. The other patient was operated on eight years ago for sarcoma of the shoulder and was also well at this time.

Dr. Halstead, in closing the discussion, said he had had occasion to look up the statistics of the operation at the time he operated on his patient, but did not find them as favorable as many were led to believe. He mentioned the statistics of Schultz, who took all of the cases operated on since 1875, and found an operative mortality of 7.14 per cent; defective recovery in 10.71 per cent.

He said that his own case presented difficulty in diagnosis. The man had been anes-

thetized, and an effort made to reduce a supposed dislocation of the shoulder joint. This brought up the question of false aneurysm or hematoma, which was excluded. A diagnosis was made by eliciting crepitation, which he said was characteristic of giant cell sarcoma. Repeated examinations of the urine showed the presence of albumose, a common symptom of this particular form of sarcoma. This did not exclude osteomyelitis, but after introducing a needle into the tumor and nothing but fluid blood being withdrawn, osteomyelitis was excluded and this left nothing but sarcoma to be considered.

The Pathology and Treatment of Recent Fractures of the Patella.

By S. C. Plummer, M. D., of Chicago, Ill.

After considering the arguments for and against the operative treatment, Dr. Plummer proposed the following as a fair statement of the present status of the question of treatment of recent simple transverse fracture of the patella:

1. Operative treatment should never be undertaken except under the best of conditions for maintaining asepsis.
2. Presupposing ideal aseptic conditions, not every case should be subjected to operation, but only those in healthy patients of suitable age, with at least half an inch of separation of the fragments and lateral tears which compromise the "reserve extension-apparatus," or in patients following arduous occupations.
3. The operative treatment fulfills all the indications for treatment in a manner which the non-operative method can only partially achieve, but good functional results follow the non-operative treatment as a rule.
4. Early massage in all cases favors the early and complete restoration of function of the joint, and should be used in all cases.
5. If operative treatment is employed, the open arthrotomy should be used.
6. Absorbable suture material applied to the soft parts is sufficient in nearly every case.

Daniel N. Eisendrath was glad to hear the conclusions of the essayist that surgeons should not employ the operative treatment for fracture of the patella unless the surroundings were favorable.

As to the treatment by non-operative methods, if the pathology of fractures of the patella was borne in mind, and treatment directed accordingly, almost as good results could be obtained with the non-operative treatment as with the operative. The pathology consisted of extensive tears in the aponeurosis as well as of the bone itself, with a large amount of effusion into the joint. If a posterior splint was applied, even though there was not exact coaptation of the fragments, by having massage applied regularly every day, for the purpose of getting rid of the effusion, and also of preventing atrophy of the quadriceps, which delayed extension, good functional capacity could be effected after three or four months. He did not agree with the essayist in advising the beginning of passive motion at the end of the fourth week, and called attention to a case which he exhibited to the Society last summer, in which he sutured the patella, with accurate approximation, but did not

begin passive motion until the end of the sixth week. As suture material he thought kangaroo tendon was ideal.

D. A. K. Steele thought most surgeons had reached the conclusion that in the simpler transverse fractures of the patella, with a minimum amount of violence, the non-operative treatment should be employed. However, in cases of fracture of the patella due to direct violence, in which the soft parts had been materially injured, or where there had been a stellate fracture of the patella, the open method of treatment gave by far the best results. True bony union could be better obtained by the use of sutures.

Wm. E. Morgan mentioned two cases which showed how surgeons were obliged sometimes to treat one fracture differently from that of another. He reserved operation as a secondary procedure in all fractures of the patella that were not compound. His results from conservative measures in ordinary fractures without operation had been just as good as from suturing. He would postpone suturing until he was convinced that useful union could not be obtained by the ordinary methods of dressings.

Thomas A. Davis narrated the case of a patient who had sustained three fractures of the patella from indirect violence. There was extensive interposition of the soft tissues between the fragments. The patient in alighting from a train sustained a transverse fracture of the patella. There was separation of one-third of an inch; also considerable swelling of the joint. After a few days' rest, massage and hot applications to the joint, an incision was made and the patella wired with silver wire after drilling holes through the fragments. Several months later the patient sustained a fracture of the other patella under precisely similar circumstances. He found a separation of from two and a half to three inches of the fragments which he had first wired, also separation of three-quarters of an inch of the recently fractured patella. He operated on the recently fractured patella first, and later on the other, wiring the fragments. The patient was now perfectly well and attended to his business.

Charles Adams said that suturing of the fractured patella depended upon the surroundings of the surgeon. If he were in a place where he could depend upon asepsis, he would be inclined to suture most of the cases. The cases he has sutured have done very well. The surgeon was bound to restrict operative intervention to those cases where the soft tissues were interposed between the fragments, or where it was impossible to secure apposition without the aid of some ligature. For suturing he had found that kangaroo tendon answered the purpose admirably.

Dr. Plummer, in closing the discussion, said there was a wide variance of opinion among writers as to the time for beginning passive motion. Scudder had advised beginning passive motion at the end of the fourth week in non-operative cases, and at the end of the second week in operative cases.

Demonstration of McGraw Elastic Ligature.

A. J. Ochsner said that this ligature was applicable to gastroenterostomy in which the pylo-

rus was not completely obstructed either by carcinoma or cicatricial constriction. It was likewise applicable for making anastomosis between the intestines. The operation could be done as quickly by it as by the Murphy button. It took about the same length of time. He had used the McGraw elastic ligature in forty cases, with three deaths.

D. A. K. Steele asked whether in any of the forty cases referred to serious symptoms had occurred from acute intestinal obstruction where the elastic ligature was used.

He said the objection to the elastic ligature and to the Murphy button was that these devices worked while surgeons were asleep. Personally, he liked to see the work finished. In any mechanical device that was used, one had to depend upon the element of time; it took hours or days for the elastic ligature to perform its function, which was somewhat uncertain. The same was true of other mechanical contrivances.

He agreed with Dr. Ochsner in saying that ultimately surgeons would have to come to the use of the needle and thread.

E. Wyllis Andrews said he began to use the McGraw elastic ligature soon after the publication of Dr. McGraw's original paper. He had employed it in a dozen cases, with one death. The elastic ligature, he thought, was a little quicker device than the Murphy button and had all its advantages. It had the additional advantage over the Murphy button in that the surgeon did not have to open a hollow viscus which might infect the peritoneum.

Arthur Dean Bevan was interested in hearing Dr. Ochsner report forty cases, with practically no operative deaths. This meant a great deal, and yet, when one turned to the work that had already been accomplished with needle and thread, the results were excellent. For instance, he mentioned the admirable report of Munyon, of 76 gastroenterostomies, with only one death, by means of needle and thread.

Dr. Ochsner, in closing, said that practically he had never done a gastroenterostomy that was as satisfactory as it was by the use of the McGraw ligature, but he desired it to be understood that he did not consider it the final thing. He felt that if he could do the operation as well as Munyon had done it with needle and thread, he would not use the McGraw elastic ligature.

As to the remarks of Dr. Steele, he said the case referred to was one in which Dr. Mayo had made a Mikulicz gastroenterostomy with the elastic ligature, and later intestinal obstruction occurred from inclusion of more than one-half of the circumference of the intestine in the grasp of the elastic ligature.

A. E. Halsted, Official Reporter.

* Physicians Club of Chicago. *

Regular meetings held the first Monday of each month at 8 p. m. The meetings are held at a hotel where dinner is served prior to the meeting. Membership 200.

Officers.

The President is chosen at each meeting.
Secretary H. F. Lewis, 103 State st.

The Physicians' Club of Chicago held a reg-

ular meeting at the Sherman House on Monday evening, November 2d. After a "Beefsteak Dinner," the subject was discussed of the **Doctor as an Investor**. Dr. Fernand Henrotin acted as chairman of the evening.

Mr. David R. Forgan, Vice President of the First National Bank, spoke on **Investments in General**.

When a banker lends a customer a hundred thousand dollars he takes the customer's note and credits the account the proceeds. The transaction increases both the deposits and the loans by one hundred thousand dollars, but adds nothing to the money in bank. Even when the customer draws checks on the deposit it does not necessarily follow that the money in bank is reduced, the checks going to another customer in the bank or even further away, to another bank. So while I am loaning money to my customers, Mr. Eckles across the street is loaning money to his customers and the exchange of checks is made through the clearing house. This credit of a hundred thousand dollars, the banker discounting the note of his customer, performs all that money can perform and adds that amount to the business resources of the community. If the customer with an accumulating bank account gives his credit note that will reduce the bank's assets and deposits by a hundred thousand dollars but will not increase or decrease the money in the bank. In only a small proportion of the transactions will actual cash be required. Against this the banker must keep a deposit in reserve. If credit be granted to a worthless customer then the bank loses the amount, the reserve is reduced a hundred thousand dollars and the liabilities remain the same. In the difference between good and bad credit lies the difference between good banking and bad banking; good investments and bad investments. In October, 1893, there was more money in the national banks by 28,000,000 than in 1892, yet the deposits were 5,000,000 less on account of the panic.

In any financial discussion we shall soon go astray if we lose sight of the potency of credit. In credit modern finance lives, moves and has its being. Some people think that credit is only the means by which you can buy and buy and pay bye and bye. It is more than that, it is the means by which representatives of property value can be exchanged. The bank note is only a slip of paper but it represents the property of the maker. Credit rests on confidence: when confidence prevails credit expands easily then the representatives of property and cash are readily interchangeable. When confidence is shaken credit contracts and in an aggravated case, if confidence be destroyed, there is a panic and then it is almost impossible for a railroad to sell bonds or for an industry to float stock. And while all this happens the money in circulation is little if any reduced. The past five years has witnessed a wonderful expansion of credit in this country. For every dollar increase of stock bank deposits increased \$7 and securities \$20. When a new investment is made it is credit that carries the securities until a market is found among investors. The rapidity with which investors absorb them and pay for them is the credit market. For instance, when

people readily invest in stocks and bonds this creates a strong demand and high prices. If confidence be shaken people prefer cash of certain value to securities of uncertain value, thus the demand is lessened, the supply increased and the price lowered, and then it is bargain day in the credit world. Many rich men hold their reserves for such occasions and they grow richer by so doing.

There are, 1. Savings bank deposits, representing not expansion of commercial credit but the savings of the common people. 2. Commercial bank deposits which represent accumulations that may be withdrawn. 3. The funds of life and fire insurance companies. 4. The funds of educational and charitable institutions. 5. The deposits of executors of estates and receipts from permanent investments. 6. The funds of retired business men. 7. The funds of commercial banks for the purpose of having some asset to be converted into cash. 8. That portion of the increment derived from a firm investment. In such times as we have had during the past year the demand has been enormous. I have not been able to obtain the statistics which present the increase in securities but some idea may be gained from the stocks and bonds listed on the New York Stock Exchange for five years, 942,000,000 of bonds, and 143,000,000 of stocks. In addition every village, town and city in the country have their own local securities. Then we have new inventions, such as the telephone, etc., so that an estimate of 10,000,000,000 issued during these five years is not astray. Yet no question is more frequently asked than where can I find a safe investment? And there is no question harder to answer. The desirability of any investment consists in (1) safety; (2) profit; (3) permanency. All three are relative terms. United States bonds are today the best in the world, yet there are men living who saw them discounted 78 cents on the dollar, yet indications are that they will be paid for in our own day.

We must consider the relative safety and permanency of investments. There are investments which are profitable but not safe; many are neither safe nor profitable but certainly are permanent.

I notice by the program that we are to have various advocates of various kinds of securities and I think I will confine my remarks to pointing out a few of the dangers in one or two lines of investment, leaving it to the gentlemen who are to follow me to point out the other side of it, which I have no doubt they will be able to do.

Bonds as a rule are considered the most conservative of investments, but the moment you mention any particular bond you run up against danger at once. Beginning with state bonds; the history of state bonds is one that we as Americans are not proud of. Today there is a list of over three hundred millions that have been gone back on by their makers; they have been repudiated. It is quite true that most of these belong to the Southern States and refer to a time during the reconstruction period, but they do not all apply to that period. The reason for repudiation is that you cannot sue a

State for a debt, so if the State does not care to pay you cannot make it pay.

But in buying State bonds if you keep to states where the commercial reputation of the State is requisite to the success of the men of the State, State bonds are very good.

Then municipal bonds also have a history of repudiation. But in that case it is different because you can sue a municipality and make it pay and so numerous have these suits been any good lawyer is sufficient to warrant municipal bonds and they are today perhaps the highest class of investments in this country, next to government bonds, the best going as low as $3\frac{1}{4}$.

Then railroad bonds: Of course there are any number of first-class railroad bonds, but there again you have to be careful, particularly when it is a new railroad. It is a well known fact that when people are promoting a railroad they try to sell enough bonds to pay for the railroad and a little more besides. There is a little water in the first bonds, to say nothing of the stock, and the letting out of the water has been sometimes an expensive operation, and the student does not have to go back far into history to find cases where they depreciate the securities and reorganize the road and sell it to a few outsiders for a song and rather to the detriment of the poor public. That is well known history. Of course actual fraud has often been committed along that line. There is a record of what was called the American Central Railroad that built 40 miles of road and managed to issue \$5,000,000 of bonds. It went into the hands of a receiver and the road was so poorly built it was sold for \$40,000 and payment was made in receiver's certificates, which demanded one-fourth discount.

Then there are public utility bonds. Any one who wants to buy telephone or street railway bonds should make this rule: that the concern ought to be going and earning its interest before you buy the bonds. Most bond holders want you to buy when the concern has not gone further than a very well illustrated and printed prospectus, and it is needless to tell you that it is your money that is going to build the road and if it is a failure your money will be lost, if it is a success you will get your five per cent interest, and all the profits are going to the promoter and not to the bondholder.

Water bonds. That is a good idea but the trouble with most municipalities is that they cannot issue bonds to a greater amount than the taxed property in the municipality. That drives them sometimes to do other things to get water works. A common thing is to form a corporation. The city agrees to take so many hydrants for fire, etc., and to pay so much annually as rental, this to be paid as a sinking fund for the bonds. The theory is good and sometimes it works out well, but there are dangers. It may not go far before the people begin to think the water is not good and the entire municipal council may go back on the acts of a former council. When I lived in Duluth they had typhoid fever and they blamed the water for it. Before that the stock of the company was very valuable, but finally the stockholders did not

get a cent and the bond holders only three cents on the dollar.

I might say a few words about real estate. I did not know my friend Mr. Houghteling was to be here, but I guess he wont object. A prejudice for unimproved real estate is common among people of small means, but it is not an investment really; it is a speculation. The idea seems to be that real estate cannot run away, it will always be there. There is a certain amount of respectability in having real estate, but in ninety-nine cases out of a hundred the man who buys real estate would be better off to put his money in the savings bank. But you have a chance to buy mortgages, and when you do unless you know the man pretty well I would advise you to see the property before you buy. It is quite possible it may look different than it does on the map, you may find something objectionable, or you may find the property is not there. I have had some bitter experiences along these particular lines, and it cost something to find out that mortgage dealers may show photographs of buildings that are not yet built, and may sell mortgages on buildings that do not exist. The principle being that you own a lot and you go to a real estate man and tell him you are going to put up this building. He makes the loan but does not pay you the money except as the building goes up, on an architect's certificate. That dealer may have given but \$1,000 on a \$10,000 mortgage with which the man is credited on the real estate dealer's books. In the meantime you have paid \$10,000 but it is for a mortgage on the foundation.

Then you should be careful to get a first mortgage. The form of mortgage in this state and others is a trust deed and there is nothing to show whether the mortgage is a first, second or third lien. In some states you have to show in the mortgage that this mortgage is subject to another, but in this state you simply give a trust deed and there may be half a dozen ahead of you.

We have building and loan associations. They are about the best thing I know of for getting money out of thrifty people. Their plans look so simple and so fair to the thrifty professional or other man. You pay so much a month, and they get your money awfully easy. But it is about as hard to get money out of these associations as any place I know of. We have in our bank a man who is as good an accountant as there is in Chicago and that man lost the savings of many years in a building and loan association of which he himself was the auditor.

I would like to say a word about stocks, to point out the difference. The great difference between stocks and bonds is that a bond is a lien on property and it promises to pay principal and interest, which promise may be settled in court and enforced. A stock is a lien on nothing, it promises nothing, and it represents, very frequently, nothing but hope of the future. Of course the hope of the future may be a very good asset but it is changeable, and you should remember when you buy stocks you are becoming a debtor, whereas when you buy bonds you are becoming a creditor. When you get the

bond of a concern it owes you money. When you buy stock you owe the money to somebody else.

There are a few rules about investments. I think it is a good rule for the investor not to put all his eggs in one basket. It is a good rule for the business man to put all his eggs in one basket and watch the basket but the investor should put his eggs in several baskets. One per cent additional interest means at least ten per cent additional risk. The days of large returns for investments in this country are gone by and the proper place for a prospectus offering ten per cent or eight per cent is the waste basket. If you want something sound an investment which will yield you a dividend, you must be content with something like four or five per cent. Interest has been going down for years and it is not likely to go much lower, I do not hold with people who say we are coming to two or one and a half per cent. We are very different from the older countries, we have so much in this country yet to be developed, our resources are enormous and capital is bound to yield good returns for my day and yours, at least.

Dr. Henrotin: I thought I felt my pocket book swelling. I have no doubt you are all richer, if it is only for the fact that you are discouraged on mining stocks; there is hardly any doctor that does not buy mining stocks. You will notice that we have left the mining stock expert out of this program.

We come now to a very important thing, real estate investments. You know what they always tell the young doctor at the beginning of his career: "Buy a home." After he has got settled he buys a home, and after he gets to be an old fellow he says, buy a farm. But in his younger days and at all times the doctor has an eye on real estate and a little advice on that line wont hurt us. We have selected a gentleman who was practically born in the real estate business and has seen this town grow since his baby eyes first noticed things. He is supposed to give you guidance in buying real estate in case your eyes are turned in that direction.

I take pleasure in introducing Mr. Houghteling, whose reputation is well known in this metropolis, who will speak on the subject of Bonds and Mortgages.

James L. Houghteling, of Peabody, Houghteling & Co.: Mr. President, Ladies and Gentlemen. After the admirable address of my neighbor and friend, who, by the process of exclusion has proved to us all that the only place to put money is in the First National Bank without interest, and whose tact and skill was so charmingly exhibited in the illustrations he gave us in the early part of his address and which were so thoroughly within our own experience; if you deposit a hundred thousand dollars in the bank today and draw it out tomorrow, such and such things happen to the bank. A hundred thousand dollars was the smallest number he could name, he would not insult us by using bills of any smaller denomination.

I want to say one or two things. I feel as I stand here tonight as Mark Twain did when he opened one of his sketches with the remark, I have been elected a member of the Western

Association and my ambition is satisfied. I have attended a dinner of the Physician's Club and it was one of the best dinners I ever ate. In the future anything I have to do with in the way of providing a dinner is going to have a beefsteak dinner for its next event. Then I was made a part of the profession by the courteous attendant who put a lump of sugar in my coffee at the end of the meal, and said, "Is that right, doctor?" I have not had such a pleasurable thrill since one day last June when I was spending Sunday in a great house in England. On Monday when I went away I gave the butler a sovereign and he said, "Thanks, my lord."

But really, gentlemen, it is a very agreeable thing to give the doctors what you might call extra cathedra, where they are taking advice, and not ex-cathedra, where they are giving it. And I am not quite sure but what it is good for the doctors. You know the reverence in which we hold you all. You know of the doctor sitting by the dying man, his finger on the slowing pulse and the wife and family about the bedside. The doctor looked up and said, he's gone. The patient said, I ain't gone. And the wife said, be quiet, Henry, the doctor knows better than you. The specialists at the head table here are going to sit on the doctors tonight.

Assuming that you don't want to gamble but want a sure income, our first advice is, call in a specialist. Why? Because the income from a good investment is in reverse ratio to the public knowledge of that investment. Everybody knows that government bonds are good. You get three per cent or less for them. Most people know that Cook County bonds, or park bonds or sanitary district bonds are good, and you get 4 per cent or less for those securities. Some people know that mortgage investments are safe, and you get about 5 per cent for those. Mighty few people know that money advanced judiciously, wisely, with experience to promote the legitimate enlargement of business enterprises is good and safe, and you get 5½ per cent and in these times 6 per cent on that sort of security.

The specialist is the man who can supply you with the brains you have not got and enable you to know the things that everybody else does not know. So I will add to the admirable category of requirements for investment that my friend has set forth, this which I deem to be the most important of them all, and that is that a doctor has no more business bungling around in investments than I have bungling around in medicine, and that the first thing you doctors want to do when you have money to invest is to pick out your specialist and when you have picked him out to trust him and not take the advice of the man who lives next door, or your wife's cousin, who knows something about lead, or the fellow who has been out West once and has seen something. But take the advice of the professional specialist, who has spent quite as much time and money in his education as you have in yours, and is as much entitled to respect for his judgment as you are for yours. I remember once talking with one of the wisest men I ever knew, he was a Boston man and I suppose wise Boston men are wiser than any other wise men. He said to me, when I walk down through the Public Gardens to my office I

stop at the butcher shop, and say, John, you may send me up a ten pound roast. He reaches around and says, this is a nice roast. But I say, no! if I look at it and it is not right it is on me, but if I don't look at that roast and it is not good, you know what will happen to you tomorrow morning. There is food for reflexion in that remark, quite as much as food for the stomach in the roast. I remember a somewhat exaggerated example of the same sort of thing, and that is all I am going to tell you. It illustrates nothing in particular except that in every trade and profession, no matter how laborious, there is an occasional oasis of sentiment that makes life worth living. It was Christmas eve, 4 o'clock in the afternoon and the snow was falling as fast at the corner of Monroe and Dearborn streets as it was out on the prairie, and the boys all had bundles on the top of their desks, and one after another had stepped in to say he would like to get off a little early. Christmas was on and I was getting ready to shut my desk when a big man with a huge fur coat stepped into the office and shook himself. I said, here he is, but a little early. He said, you are Mr. Houghteling? I said, yes. He said, do you think mortgage loans are perfectly safe form of investment? I said, no. Do you think they are as safe as anything else? I said, yes. Take that and invest it for me and I will be back in a week or so. I opened the paper he gave me and it was a certificate of deposit for two hundred thousand dollars. It looked like a certificate of deposit. I said to him, you will take a receipt for this. He said, never mind. I said, yes, your reindeers might run away. I called a stenographer, and I said, received of I looked at him. He said, it is on the paper—received of John Jones an instrument in writing as follows: I did not care to say it was a certificate of deposit, I quoted it and gave him his receipt and he went away. He came back in about a week and said, have you got those securities? I said, I have selected a number of things for you to look over. He said, not at all. I have made \$700,000 in reapers and have retired from that business. In making reapers I learned that the way to get a thing done that you do not know how to do is not to do it yourself but to get the best man you know of to do it for you. He bunched up whatever I gave him and went away and that was the end of the transaction. That is a pretty story and I have no doubt my distinguished Scotch friend could pick it to a million pieces, but it is an exaggerated illustration of the one point I care to emphasize—send for a specialist.

Dr. Henrotin: If there is one rock upon which the prosperity of the doctor has split it is the rock of getting tips. The doctor takes tips from his patients and he gambles on those tips. I have some very distinguished friends in the profession who have been able to make a good deal of money out of tips from their patients. But they did not make much in the long run, they got an idea that they were financiers and went around picking up tips and before they got through did not make very much out of these tips.

Following the line of argument of Mr. Houghteling we will call upon a gentleman who has

tips for us. You are now ten per cent richer than a while ago and when you get a few tips from the man who makes a specialty of them you will be still further enriched.

I take pleasure in introducing Mr. Granger Farwell, President of the Stock Exchange, who will speak on Stocks.

Mr. Granger Farwell: Mr. Chairman, Ladies and gentlemen.—A large amount of my fluency has been taken from me; my predecessors have not only made a great many good points but have covered a great deal of ground that I had intended to cover. I think my subject is somewhat led up to by Mr. Forgan's remarks on mortgages and Mr. Houghteling's remarks on bonds, and that reminds me that perhaps as an elementary fact there should be some definition given as to what financial problems may mean. One of the best definitions of that kind was made on the New York Stock Exchange a few days ago when one member was asking another what a syndicate was. He replied, it is a body of men surrounded by water.

Aside from these few thoughts that have come to me this evening, my first pleasure was when your secretary announced to me that we were to meet here in a spirit of reciprocity; that you physicians were to obtain from us the knowledge which we may possess of finance so that your scope would be broadened and your profits increased. Naturally as a sequence I expect that after I have been enlightened by you, at some future day the practice of medicine by me after the close of stock exchange hours will be interesting and remunerative.

The Chairman has put it up to me to recommend speculation and not investments, but I am going back on him, I recommend investment and not speculation. A good many years ago when one of the prominent lawyers of Chicago and myself were starting out to earn our living here he said something to me that has made a great impression on me and which I have seen illustrated time and time again, and which I believe is absolutely sound. He said: "I tell you what I have observed in the legal profession; a man gets acquainted with business methods, he becomes interested in business, he takes his money and puts it where there is an opportunity to make money with it, and what is the result? If he makes a fortunate investment his mind is taken from his profession, he is not as good a lawyer as he formerly was. If he makes a bad investment his mind is taken from his profession. In other words, a professional man cannot have opportunity to understand business problems well and he had better go without the opportunities of making money and keep to the line of his profession, which will mean ultimate success and make more money for him if he takes four or five per cent than if he should be more successful from a business standpoint.

The other point I was to bring up has been touched upon by Mr. Houghteling. Suppose the physician saves money and wants to make investments, what is the first thing to do? It is to go to the soundest, cleanest, ablest man you know for advice. I would have that ahead of any other requisite in making an investment.

Mr. Forgan has touched upon the next point, that is, government and municipal bonds are

questionable as to whether you want to put your money in them or not. My reason is different than that given by Mr. Forgan. We will say, for illustration, that they are good. But you there meet a competition which is unfair to you, you meet the competition of the national bank and the savings bank, which have these bonds, and they will take them on an interest bearing basis, and in my opinion you can do better with your money.

Stocks are divided practically into two classes; that which we call rails and that which we call industrials. Before considering which one of these stocks you will take you have gone to the man I recommended you to, to the best broker or banker you know of and have obtained his advice on the subject. I believe that advice will very largely drift to rails as against industrials. After he has given you a dozen items which he thinks fairly good investments, before you commence to investigate their intrinsic merit, see who the men are in the directories of these companies. I regard it as the most important thing you can consider. You will find as a general rule where a board of directors are able, honest and experienced, you have the strongest safeguard around your investment of anything I know of. The men who have a record of not having managed the corporation for the interest of the stockholders but rather for their own personal interest are the men to let alone. Buy stock where the directors have a record of unquestioned probity. I think when you do that you have ruled off a large percentage of the dangers surrounding you.

The reason I discriminate against industrials in favor of railroad bonds and stocks is that speaking on the average I do not think they are safe investments. There is no doubt that you can buy industrials which will yield you a handsome rate of interest and be a pronounced success, but I cannot advise you on that basis, my remarks are on the average, and under the laws of the United States as they exist today, with an absence of public accounting, with an absence of publicity as to the methods which surround the industrial corporation, with the differences in the laws of incorporation in the various states, the industrial problem is at present a dangerous one. On the other hand the investor in railroad stock is to a certain extent safeguarded. There are monthly reports required, there is a greater amount of publicity connected with the management and doings of a railroad corporation than perhaps any other public corporation in this country. So my opinion would be if you were going to buy stocks and wanted something with a chance of increasing the amount of money invested, as well as bringing in a fair income, to put your money in railroad stocks, managed by the ablest body of men. I would follow it up with statistics in relation to the railroad's earnings, what percentage are required for operation and maintenance; what are its fixed charges, as well as interest account; how large an amount of the surplus is applicable to dividends and how much goes into the reserve fund. Do not base your judgment simply on the rate of dividends paid. Every road that earns ten per cent and pays four is better than one that earns eight per cent and

pays five. We had a great many illustrations of that in the years prior to 1893. Previous to that time the method of running a railroad in the United States was to distribute to the stockholders all the money earned and to increase its equipment by borrowing freely. The result was always a receivership. Today a well managed road is run on an entirely different principle. It is safe to say, although there are variations, that most roads in America during the present prosperous times are distributing to their stockholders only about one-half of their actual net earnings applicable to dividends. Every dollar they do not pay out to you is a reserve which protects your interest in the future, your property is being improved and strengthened and that which you do not get today is increasing the value of the property, and you will continue to get the fixed rate of interest you expect. So in a general way my remarks would look to recommending the highest class if you want investment in stocks. That you can get a rate of interest little if any more than you would get on a bond shows that in public estimation they are regarded as almost as good as bonds, they would not be selling at that price if it were not so. The reason is that the method of conducting a high-class property of that kind is such that it enhances the value of what you are likely to receive in the future. All the moneys which they are not distributing to you because they deem it wise to build up a future, will come to you sometime. You as a stockholder have your interest in it, it is your money, and I think my associates will bear me out on the general principle I state that if you choose the best you are increasing your chance of a profitable investment.

Dr. Henrotin: We have had good advice how to make money and how to beware of investments. We are now in the middle of the program and we find that the committee has put in "Speculation in and out of the Commercial Exchange." Doctors have bought and sold wheat, I know positively; it is a dangerous business. As a matter of fact, the Board of Trade and its surroundings are rather a dangerous locality. The committee looked for a man who is never afraid to speak out what is in his mind and tell the truth, they picked out Mr. Lindblom to tell you something of the dangers of the Board of Trade and its surroundings, because Mr. Lindblom always tells the truth fully and fearlessly, and we thought this would be the place to introduce this little alternative.

Robert Lindblom: Mr. Chairman and doctors—The ethics of functions like this prescribe that the wornout subjects which are necessarily dished up as an intellectual delicatessen should be treated with the conventional consideration shown to the dead; only good should be spoken. This delicatessen very naturally gets tiresome and insipid and I presume, as the Chairman had the grace to tell you, I was called upon to respond to one of the toasts because I might be relied upon to diversify the program by telling the whole truth upon the subject.

Commercial exchanges conduct business pretty much the same as other people do but insiders have invented words to mystify the outsiders. As a general principle only one of two things can happen from a certain point during

a given period of time; the market can only advance or decline, it can't do anything else, and no one can guess right half the time. Why is it that men on commercial exchanges go broke? It is simply because old speculators take small profits and large losses.

The Board of Trade of Chicago is an institution of which Chicago might well be proud. Its membership, so far as integrity and modern ethics are concerned, stand on a vastly higher plain in the business community outside of the confines of the exchange. How much of this is due to the fact that necessity compels it I do not care to discuss now. In the last analysis it might be found that all of it is due to the instinct of self preservation, for without a high degree of commercial honor the institution could not exist. This refers to the men who personally make contracts with other members on the exchange. To the great speculators who move the pawns on the exchange nothing is sacred. Said one to me once, "Honor be damned! you must succeed."

The subject of manufacture, earnings, exchanges and a lot of other rubbish is paraded through the press to defraud and deceive the public. The whole financial system is a farce. In the standing of America, England and the Continent there would be no great difference in the exchange rate, but the money lenders could not rob you going and coming. The banks could secure this uniformity in money but they don't want to. I have worked at it for twenty years, but without success.

The Chicago Board of Trade is the most tyrannical labor union in the world, without any exception. They tell you not to work before 9:30 or after 5 in the afternoon. If you do you are suspended for one offense and expelled for the second. During this year I was suspended three times. The labor unions are not so tyrannical. They tell you how much you must charge and if you work for less you are expelled. Yet I have frequently heard members of the board of trade berate the exactions of other labor unions. The members are as a rule about their own business not easily imposed upon; they are very generous and charitable but sadly lacking in general intelligence; and they are also so intent upon their own business that they neglect the policy of the board in general. And yet speculation is the only business in which an absolutely honest man can engage. In every other business particularly in your profession, you must be a hypocrite or you will lose patronage. But in speculation you can only buy or sell whenever you please. They say it is gambling, but personally I do not care so much about the names as about the substances so long as the business is honest. As far as that is concerned our whole life is gambling. I insist that speculation on commercial exchanges is just as respectable and legitimate as any other kind of business where you don't produce anything, and I say that speculation outside of commercial exchanges is just as legitimate as inside the exchanges. It is rank hypocrisy to draw a distinction.

When you buy anything in the commercial exchanges you buy something that has intrinsic value, in contradistinction to the bonds and

stocks of which you know nothing. If you want the actual property you can get it, so there is nothing more illegitimate about it than to buy real estate to sell again, for in the long run the supply and the demand will regulate the value.

To say that speculation in options is a necessity is to class the business with too much importance, for we know that to a large extent the daily business is conducted without that kind of speculation being indulged in. On the board of trade for this year I have dealt in actual cash grain instead of options and the logic of events will soon compel the board to adopt a plan similar to mine. When that is done the objections to board of trade business will be eliminated and speculation will assume its full legitimate functions on commercial exchanges, as it now does off the exchanges.

You have probably heard about selling short, that is to say to sell for future delivery something you have not got, hoping that before delivery time you can buy it cheaper and make a profit. A short seller is also called a bear and it is fashionable to be a bear now. For about twenty years after the civil war wheat was \$1 a bushel and old dealers were ruined when it dropped to 70c. We now have a new school of speculators who look back ten years and regard 80c. as a high price. Many speculators were ruined last year and this year many will be as they look back on low prices. In the period of years from 1893 to 1897 we had large stocks of grain very expensive to carry, and yet an insane arrangement, still in force, empowered the short seller to collect storage, insurance and interest on grain which he did not own and never expected to own, and short selling was very popular and profitable, until it has become a mania of short selling, about as the banker who collects interest on other peoples money and keeps it. Short sellers during the time of big supplies are bad for the trade and country at large, while in times of scarcity, like now, they perform a useful function, which I will briefly explain. There is not now and has not for three months been wheat enough to supply the demand of millers for home consumption, and there is probably no wheat on the Atlantic coast for export. Cash wheat in Minneapolis sold for \$1 in September and has been 90 cents since. It is relatively as high in other markets, and there is no telling how high the market would have gone but for short sellers who stepped in and said wheat is scarce now but I believe it will be plenty later on and I will sell you wheat for May delivery at 5 per cent less than the price now. Many people who believed that high prices would keep up sold their wheat and bought an option probably 10 per cent below the price now and in that way the tension is removed and the short seller takes the chances. In this way he performs a useful function. Should he be wrong in his calculation he will be the cause of still higher prices when he gets scared and has to buy back.

I have been in the business for 30 years and I have never encouraged, much less advised, any body to speculate. The most I have ever done is to say, if you are determined to speculate I would like your commission.

Economic evolution is the elimination of useless middle men, expenses and compensation

and I can foresee the time when the farmer through his own agency will deal directly with the consumer abroad and when commercial exchanges will be useless.

Dr. Henrotin: Now we come down to business, real business. This is doctor's business, life insurance. We all know many departed friends whom we know left nothing but a life insurance for the good wife and the children. How many, many doctors there are who leave that and only that. How interesting it is, and how much we should be informed on this subject I leave you to surmise. It seems almost to the experienced and older physicians who have seen what is going on in the medical profession and the improvidence of most doctors in regard to saving their money, that the doctor should put his first dollar into life insurance as soon as he graduates. It only takes one small payment to start with. There are various kinds of life insurance, there are fraternities and there are mutual benefit associations and all sorts and varieties of that kind of insurance, which had better be left alone. A medical man ought to have a life insurance, from the first of his practice and begin with his first dollar, taught by the history of the past. But he must have a good company, and we have some one here tonight to tell us about good companies and the value of life insurance to the professional man.

Allow me to introduce Robert Skene, Jr., of the Mutual Life Insurance Co. of New York.

Robert Skene: Mr. President and Gentlemen.—About the middle of the day I was called up over the 'phone and told Mr. Norton could not be with you this evening and I was requested to make a talk on life insurance. I never knew a good life insurance man to refuse a chance to talk, so I said, give me five minutes to think it over. The answer was, we will send a doctor to operate on you. The doctor came and I decided to accept the kind invitation.

I feel myself to be in the position of the Irishman who went to a hardware store and after making a number of selections, the proprietor said, Pat there is something you ought to have.

What's that?

That is a bicycle.

What would I do with that?

Why you could ride all over with it.

What would it cost?

Seventy-five dollars.

Seventy-five dollars! I would rather buy a cow.

You'd look like thunder riding around on a cow.

I'd rather ride a cow than milk a bicycle.

I will have to either ride around on this extempore speech or milk the bicycle and lose a chance to talk.

A great deal has been said about the specialist. We all know that there is no more serious subject for the layman to consider than "who shall be my doctor?" Let a man go into a strange community, he first finds a place to live and the next thing is, where is the nearest good reliable doctor.

If he cannot find out one he hunts until he does find out a man he can rely upon and he gets acquainted with him so that when a calam-

ity comes he can make a hasty call. There is nothing more necessary for the doctor in making his selection of investments than to find a specialist. I hoped to have the advantage of the arguments used by the gentlemen who have preceded me but they have taken my talk away from me. It reminds me of the stockyards, all of you fat lambs and steers are on a run and are being pushed by the drivers behind you right down into life insurance. There is no other place for you to put your money except in life insurance. The other speakers have told you there is nothing in bonds; stocks are uncertain; real estate is a sham, you only get a picture of it, so what chance has a man to make a selection.

Let me say a word about life insurance. Some time ago I became acquainted with some business men in Chicago and after a very satisfactory deal with one of the brothers, he said, "I want you to insure my brother, who is a physician." He is a member of your Club and of considerable prominence. I called the doctor up over the 'phone and said, "I am so and so of the Mutual Life. Your brother has spoken of you to me and I want to come over and have a talk."

Oh, he said, it is not necessary to come over; just send me over some papers.

I beg your pardon, I am a professional life insurance man. If I should call you up and say my wife was sick, you would say, I will come over. I would say, don't come over, just send me half a dozen prescriptions and I will fix her up. Doctor, I want to diagnose your case, I want to come over and get your pulse, take your temperature, listen to your heart, thoroughly examine you and know what to prescribe for you.

The doctor said, I see the point! Come over and see me, examine my heart and take my pulse.

I said, it is your financial pulse. I want to listen to your heart and see if you love your family or are a selfish man.

After a long talk with the doctor I decided what he wanted and prescribed for him. The result of that interview was that each year since then I have helped the doctor out with more life insurance, have helped his family and friends, because in a number of interviews with that family they tried every way in the world to induce me to tell them something that was not true about life insurance, and you all know it is impossible for a life insurance man to do that.

These gentlemen, contrary to all I expected, have told you of the dangers of investment and how to keep away from everything. If you have been able to find anything that was a good feature to take hold of it was more than I could do.

In life insurance, leaving out the fraternities and assessments there are more than 70 old line companies. Of these 70 there are at least thirty good companies.

Let me tell you what chance the doctor has. If he is able to select a specialist—and by the way, one of the first things, we have been told, is to select your specialist and let him pick out what you are to invest in. But I say, first pick your company and if you have any doubts, every company makes a sworn statement a copy

of which you can get through the insurance commissioner, and you can see which companies have the best assets and are well balanced. When you have selected your company, hunt around for a good respectable agent. There are plenty of them, just as there are plenty of good physicians as well as a lot of quacks and no good ones. The same rule works in life insurance. After you have selected your company and your specialist leave the matter in his hands and make him responsible.

I want to say a word to the doctors on life insurance outside of investment, and that is that, in spite of the increasing number of doctors, we are continually having a decrease in mortality. Longevity has not increased but mortality has decreased. From 55 years on there has been no improvement in mortality, but from 55 years down there has been considerable improvement in mortality showing that the race is growing better and stronger. This I have no doubt is due to progress in science and the help of the doctor.

I want to say further that many years ago a woman was charged more for life insurance than a man. For some years many companies have taken off the extra charge but made restrictions, but today at least one company, the one I represent, makes no difference, and today a woman is considered a better risk than a man. I mention these improvements as along the line of your profession.

I want to say a word in confirmation of Mr. Forgan. Some years ago I had a number of interviews with J. J. Mitchell and we had an argument on the matter of decrease of interest rates. He made the statement that I would see the day when there would be a continual improvement in interest, and I have been pleased to note this last year that a number of financial transactions have taken place showing this to be true.

I hope that now after all the shoals have been pointed out to you and the only runway in which you should move, you will come my way.

Dr. Henrotin: We have heard all the kind words the gentlemen are willing to give us about investments and we are now about to listen to some of the oratorical talent of the Physician's Club, on a subject that is attracting a good deal of attention. I suppose most of you have noticed that the town is becoming dotted with hospitals and sanitariums; and throughout the country the people at large are beginning to realize that for disease to be properly treated we need hospitals, and the day is not far distant when proper hospitals will be provided to meet the demand.

We have with us, Dr. Ferguson, who, as you all know, has a hospital. It is a matter of importance that the hospitals of large communities be standardized and put on a proper basis, for with the large increase in the number of hospitals have come into vogue a certain number which are not what you would call the proper variety.

As an investment, also, doctors are constantly being asked to join in movements to provide means for the erection of hospitals. As an in-

vestment it is advisable that the profession be well informed on the subject.

We have been told that Dr. Ferguson runs a remunerative as well as a high standard hospital and he undoubtedly can give us good advice as to the risk and the value of the hospital as an investment. I will now call upon Dr. Ferguson.

Dr. A. H. Ferguson: Mr. Chairman.—After the eloquent speeches you have heard embodying wit, humor, philosophy and perspicacity, you must not expect a speech from me at this late hour, I shall therefore give you just a little talk about private hospitals and sanitariums and my own experience therein.

The subject of hospitals and sanitariums as a field for investment for the doctor is comparatively new, from a professional standpoint. It is far-reaching as far as the profession is concerned inasmuch as it touches upon their work, their everyday employment. It promises a fruitful field for an investment when properly conducted, when you don't attempt to conduct it yourself but allow your business manager to do that. In this field, of which the doctor is the natural settler and preemter of its forests and prairies, while doing his daily work he can perform a work of the highest kind for humanity and for himself. The difficulty is at present that he finds this natural inheritance of his, this land, is filled with squatters that are as hard to dislodge and evict as are the desperadoes of Gray County, Kentucky. The most formidable among these are the various religious denominations which have had hospitals of their own from time immemorial. It is a very laudable thing for the members of the church or of a certain society to do charitable work and not allow their members to become a charge upon the public but just as soon as they add private wards to their charitable institutions, just that moment they infringe upon the natural rights of the doctor, for they know but comparatively little about ailing humanity, and all they do learn about it is from the physician who puts in many and many an hour there for nothing. There is no reason why the doctor should not be benefited by the income from keeping his own patient or from the manufacture of the drugs which are a product of his scientific brethren, or from all the associations connected with hospitals and sanitariums. It is a perfectly legitimate field for the doctor to occupy. Remove then all these semi and pseudo charity institutions from our midst and you will find the private hospital a very enticing field for the professional man to invest his few dollars in and get a handsome interest therefrom. In Chicago it is probably more difficult than in other cities to maintain a private hospital on account of the competition. The competition is such that they under rate you in everything in connection with a hospital and where they fall behind at the end of a year they appeal to a certain denomination or church and get the money, or they get hold of someone with a good deal of money and in declining years, and they get some money.

In Chicago all the hospitals, with the exception of one or two, are open to reputable general practitioners to bring their patients. In New York City it is quite different; all the hos-

pitals there have their staff and no one is allowed to treat patients in these hospitals unless he is on the staff, consequently we have a very fruitful field for private hospitals and sanitariums.

For the sake of practicability let me put private hospitals into three classes: 1. The one which is owned by one man for his own patients. A man with reputation and following we will say ought to have a private hospital of twenty beds, that is quite sufficient and would cost \$2,000 a bed to equip and erect, which would make the hospital worth \$40,000. I have made a close calculation of what that hospital would bring in, and without going into details we will take it for granted that out of twenty beds twelve would be kept full the year around, leaving out one month for improvements, holidays, etc. We will say then twelve beds at \$25.00 a bed, add to that nurse and dressings and the operating room and it would bring in \$25,200.00 a year, at a low estimate. Dealing with my own experience, it takes not quite two-thirds of the income to maintain and run the hospital and pay for the improvements. That would leave one-third as profit which would be \$8,400 profit out of \$25,200. The interest then, from the investment is \$400 over 20 per cent. I was a little reluctant to tell this to Board of Trade men and bankers because I thought it might bring about private hospital building. According to the class of cases that are in the hospital during the year, the remuneration might be considerably more and it could not possibly be very much less.

The next class we will say build a hospital with 50 beds, costing \$2,000 a bed and you have an institution equipped worth \$100,000. Say that 20 per cent of the beds are empty, then there would be 40 beds full the year around. This hospital would be under the management of three or five men, not more than five nor less than three; supposing one went away and one was sick, the hospital would be sure of one all the time. The income from these beds would be \$51,000 the profit \$17,000, an interest on the capital of 17 per cent. But that kind of hospital is practically the hardest to carry on because it has to have a full staff; two engineers, a bookkeeper, a druggist, a business manager and a lady superintendent, and all that costs money, so that it takes more to run this hospital than the first one I mentioned, and it takes a great deal more than the third class.

The third class of hospitals are those of 200 beds, costing at the same rate for erection and equipment, \$2,000 a bed, would be \$400,000. I think that is a fair estimate. We will say that 20 per cent of the beds are empty, that would leave 160 beds full the year around. We will say that in this hospital hotel rates and nothing more are paid, that no charges are made for drugs and dressings, that the rates are from \$1 to \$5 a day, making an average of \$3 per day income for this hospital which would be owned and controlled by an unlimited number of doctors, with a board of directors, manager, etc. The income would be \$161,280 and the net profit \$53,760. After taking off a good deal of the income for drugs, dressings, operating room and so on we still have an interest on the cap-

ital stock of 13¼ per cent. This is the co-operation hospital. From time immemorial the profession have been laboring in the various hospitals, public, semi-public and denominational and all their labors, except their fees, have gone into the institutions and been used by them for improvements or for charity purposes.

The sanitariums might be gone over in the same way. They belong as legitimately to the doctor as do the hospitals because the doctor knows best what the ailing public should have in these institutions, and they know best how to equip them for the sake of humanity, as well as for the sake of those who have fat pockets.

If the profession would stay together this is a safe investment, safer than any other investment I know of. I think it is very liberal to say that 20 per cent of the beds would be empty; I think it is very liberal to say that it would take 25 per cent of the income to run such hospitals, and it doesn't. This is in keeping with my own experience. Facts are chieftains that won't "gang awa and canna be displaced," as Burns says.

While that is so there are objections to private hospitals. The first I have in mind is the taking away of the attention from scientific work to business, but I find it does not do this as much as I had thought. A meeting once a month does not take very much from your scientific work. With a board of directors, and these ought to be doctors, they can direct the institution every day and can replace things quickly and get needed supplies at a minutes notice, whereas in public hospitals they have to wait for public notice or for the new year.

A disadvantage is one of discipline, which takes a good deal of time, but it is in the line of your work, you are disciplining young men to be future specialists in their calling, disciplining nurses in the care of the sick, so this disciplining that takes time, is an education to yourself as well as to the men and women under you.

The responsibility is considerable: You are responsible for the mistakes of nurses in burning a patient with a hot water bottle; you are responsible for internes who run out and do malpractice and have suits brought against them; you are responsible for the mistakes of the employes throughout the whole institution. That on one man might mean ruin, but when you take history you will find there are very few hospitals throughout the land that ever get damages against them in a malpractice suit.

It is an additional mental strain, it is true, but what can be accomplished without mental strain? In every line the man who works over time is the man who will come out ahead. This is in your line of work and the mental strain is not as great as if you had put \$10,000 or \$20,000 in a gold mine and never see it.

Again, we find an objection in the danger of a contagious disease breaking out, such as smallpox, where a hospital would be vacated for six months, and probably would not get over it for a long time. But that happens very seldom, and it would be under the control of the doctors themselves.

The advantages are many: First, the doctor has absolute control over his patient, he has control over his interne and his nurses and they

have to report to him every morning, and if this order or that is not properly and completely carried out you can say what to do with such person. The scientific work therefore is more reliable than where you have no absolute control. You can give more satisfaction to your patients where they are under your care every day and when you have such a following as will do your bidding. In the larger hospitals a congenial staff can be selected; you are not at bid and call, solicitation and repudiation as you are when connected with other public hospitals. You are selected and the doctor thinks no more about it but will do more for you than any other class of people. I believe the most charitable men in the world towards the doctor are doctors, and when a doctor is in trouble his brethren will rally around him and if he chooses will help him out handsomely. Under cooperation like this it would be easier to stand shoulder to shoulder in the trials the doctor has to meet with in this arduous although pleasurable profession.

It would give the profession a higher standard than they have today, they would be absolute and supreme in their work, whereas now they are not. It would give them freedom; it would command the respect of moneyed men much more than now. The profession do not want endowments in order to carry on their own work. Let the endowments go where they belong, to scientific research, and to the poor. Let them go to the education of the various young men throughout the land who choose the medical profession as a calling, but the profession itself does not want it, does not need it and should not care for it. Such private hospitals are the places where specialists would be best met. If the hospitals which control private patients were in the hands of doctors we would get less poor operating and less miserable attendance and less inefficiency than is occasionally the case now. This would improve the conditions more than anything else that could be injected into the surroundings of the medical profession. The gathering of bread to be cast upon the troubled sea of suffering humanity would then be a dispensation at the hands of the doctors more than it is today.

Dr. Henrotin: Now that we have all become so wealthy after all this advice, I will say that before the tidbit that comes last on the program, I have been requested to call upon another professional gentleman, a profession that makes more than the medical profession does, the clerical. They are well posted on investments. We have with us a gentleman from Boston, the Rev. Dr. Burleigh, of the Union Park Congregational Church, that some of our friends wish to have give his views upon investments.

Rev. Dr. Burleigh: Mr. Chairman.—It is a pleasure for me to be here tonight, particularly as I have followed with great interest the labyrinthian remarks of the gentleman connected with the national bank, united with the mercenary institution of the gentleman behind me.

I want to give you the real thing tonight. Mr. Forgan believes in the national bank, Mr. Houghteling believes in some other things; I want to say after living 15 years in Boston if he does not know more about mortgages than he

does about the geography of the public garden and the butcher shops in Boston it would be unsafe to look to him for advice. I fancy I can see that man leaving Commonwealth Avenue and crossing the Public Garden to reach the butcher shop. Other gentlemen have offered alluring fields for speculation but I want to present to you the real, the great investment, investment in an incorrupt and unsullied manhood. When Mr. Forgan arrives at the last analysis he says credit, and credit is character. When these gentlemen come to the final sticking point, in each of their professions, they ask you to find reliable men, and reliability in manhood is character. I want to say to you that better than the First National Bank, better for you than the best bonds and mortgages in this town, better for you than the best insurance company in this land, better for you than the best board of trade, and I suppose the Chicago board of trade is the best in the country, and the best investment for you, gentlemen, is the mastery of your own calling so that your skill commands confidence and your character commands credit. That is the real investment for any man. There are multitudes among us of all professions; there is the money-making minister as well as the money-making doctor, the man whose primary standing in the community is as a money-maker. But it has always been the glory of a professional life that most of its members have said, the profession first and its compensations afterwards. I have been in Chicago just a year and have got the gait to the extent of not urging that a man shall look upon a profession merely as a philanthropic affair, but I am here to say that if the greatest of the great professions, what we call the learned professions, proves anything it proves that the men in them who have prospered have prospered by the quality of their manhood and their skill and power in doing the natural tasks that came to them in the course of their professional service.

When you have not skill enough to attend properly to your patients the First National Bank won't lend you a dollar; when your reputation as a doctor is such that you cannot meet the natural demands of your profession you will follow the natural channels of all men who are without resources. There is one thing that can be capitalized besides visible assets, and the mercantile exchanges are discovering it. Sometimes a man's future can be capitalized if that future is based upon integrity and uprightness and quality and skill and devotion to his calling. You are the men in this great middle West who are to make the standards for the future; you have the whole great, wonderful future before you. As you look over this whole field what is the one great tremendous thing for which the whole country prays? It is a manhood that can be trusted, that can take the public helm and steer straight through the storms of distress, doubt and fear. What all our professions are calling for are these men who are gentlemen and scholars and as practitioners in the particular work in which they are engaged are typical workmen that we need not be ashamed of.

Thanking you for this privilege of speaking to you I want to say that one of the happiest

recollections I shall carry of Chicago is this evening spent in the genial company of the Physician's Club of the city of Chicago.

Dr. Henrotin: Dr. Bridge has been getting somewhat impatient, he is full of his subject, I know. He has a theme which is certainly worthy, it is an easy subject, there is plenty to say on it. It is "The Doctor as an Easy Mark."

Norman Bridge: I am not prepared to make a speech at this late hour. I wish to congratulate you however upon the symposium to which we have listened; it certainly is one of the most interesting I have ever listened to. I have almost reached the point of saying that some of the speakers tonight have seemed to regard the doctor as an "easy mark" for some of the gentlemen have, mostly very wisely, instructed us as to how we should make investments with the same assurance and the same appearance of certainty that we would adopt the advice, that our neighbors across the street and our wives, uncles and others have come to us with various and sundry schemes, that some of the gentlemen have referred to. In the main the advice these gentlemen have given us is very good, even though they have directed us towards their own particular shops.

I had about made up my mind I should say something in criticism of our friend's hospital scheme from the standpoint of ethics of the profession. But our friend from the West Side missed the mark completely, I am sure, when he arraigned the proposition as being wrong and out of character, because it is not. I have this very day urged some young doctors living in a small town where there are no hospitals and where patients cannot receive the best care, particularly surgical care which they need to invest their money in a hospital and in such a way that it shall bring them an income. I have said that it is out of character for a town of ten thousand people to be without a hospital where patients can be treated surgically in the best way. The young men have said, "Nobody will build a hospital; we cannot get our patients properly cared for; we do operations under adverse conditions and they die in larger proportions than science would require or admit that they ought to." My advice was, you go back and get your brethren united and build a little hospital, and try to make it pay so you won't be bankrupt, treat those patients as they ought to be treated and save their lives. There is no character higher than that.

The hospital that Dr. Ferguson talks about and that I talked to these young men about, is not a hospital that is a hotel for invalids, which probably has been necessary in Chicago. It may not be necessary in Boston, it is certainly necessary in every little town of five or ten thousand people all over the country, and if the public in other ways and through other channels will not build such hospitals the profession must create them themselves. There is an objection, however, to this scheme. I refer to the ethical objection that has been ground into our minds for a quarter of a century, that, for example, we should not have a financial interest in a drug store. Why? Because it would appear to the public that we directed our prescriptions to that particular drug store for mercen-

ary reasons, to make money for ourselves. I remember through 25 or 30 years of experience in this city that hardly a reputable physician has had an interest in a drug store, and for that reason. That seems to me to be a clear objection to our investing money in hospitals of this kind; that it would seem to many people as though it would lead us to send patients to that hospital who perhaps did not need to go. And whether the public believed it or not might have that effect upon us. If that is the case it is a good logical objection to the principle Dr. Ferguson has talked about.

But so far as the mercenary side is concerned we must remember that the mercenary side can never be forgotten. The people who are able to pay physicians should pay them. There is another objection to these hospitals, they do not provide for the poor. The philanthropy of the profession should always go out to the poor and we should always encourage those hospitals that are more or less lacking in mercenary character.

What we came here to study is the question of the doctor as an investor and what my friend Mr. Forgan said and what Mr. Houghteling said about the doctor as a fool of a business man is not quite true. There are a great many physician's, doctors, surgeons, who are good business men. They watch the trend of events, they know how people fail and how they make money and they know a good deal about the kinds of investments. I think there are some doctors here tonight who might intelligently discuss with Mr. Forgan or Mr. Houghteling the methods of running a bank or a real estate business but it is true that many of us could give instances showing the gullibility of the doctor.

All the advice that has been given us tonight to lead us to avoid that sort of gullibility and lead us as physicians into the ways of making safe investments, is good. Most physicians of 50 years of age and many of 30 or 40 could tell you, if they would, of some fool investments they have made, exactly as servant girls or other women have made investments and they have shown no more wisdom than these women have. It is a matter of psychological interest why they have done this; why does not a man make a wise investment every time? Why does he not go to the successful business man and take his cue from him? It is a psychological fact that the moment a doctor resolves to make a rash investment he shuts himself up and wont discuss the matter with any first class business man. Perhaps the person who invites him to make the investment tells him not to go to a banker, but here are the figures, ten, twenty or forty percent. As soon as he decides to make the investment, perhaps thinking somebody may laugh at him, and believing he is going to get great results, he will refuse to talk about it, he will keep it a profound secret so that he may prevent himself from having the only advice likely to save him, namely, the advice of a successful business man.

Just one other thing I want to say. We get ourselves into methods, sometimes unnecessarily and one of these methods I would like to criticize is the habit of making our charges according to what we may regard as the capacity of the

patron to pay. Some of these business men may not know that the doctor always feels extremely cheap when he has asked \$10 and the man expected to pay \$50. He feels very sorry, and the next patient is likely to be treated unfairly because he is liable to be charged more than he ought to be simply because the last patient was willing and expected to pay more than he was charged. That is unfair. It is not, however, so demoralizing as an experience I heard of today, and which is very common with the profession, I am sorry to say and I suppose we have all been more or less guilty. This was an instance where a man had performed some service that he thought was not very valuable because it was very brief, and as he was walking down the street going to meet the man for whom the service had been rendered, he talked over with his friend what he should charge. The friend thought he should charge \$300. But he said, I don't think I should charge him so much because it was not much of a service. He found the patron was overjoyed at the result of the service; he thought a great service had been rendered and said doctor, how much shall I pay you? Pulling out a great roll of bills he hesitated a moment then held out to the doctor two bills of a thousand dollars each and said, how will that do? The doctor saw that the next bill on the pile was five hundred dollars, and said, I guess you had better put on that bill. That is said to be a true story. But it is a fact that such things have happened in the experience of a great many physicians and more surgeons. That is speculation. That is worse speculation than anything Mr. Lindblom ever saw on the board of trade, or our friend on the stock exchange and any man who falls into that habit is very likely to overstep his limit and make an investment that turns out very foolish, in the end.

There were present at the dinner one hundred and seven members and guests and at the meeting about one hundred and thirty-five; the largest attendance of any meeting of the club.

Henry F. Lewis, Secretary.

 * Southwestern Section of the Chicago Medical Society. *
 *

 Meets the first Tuesday of each month at 8 p. m.
 Membership 80.
 Officers.

President.....T. C. McGonagle, 5504 Halsted st
 Vice President.....H. H. Hagev, 4191 Halsted st
 Sec'y-Treas.....C. H. Lovewell, 6058 Wentworth ave
 Official Reporter.....F. L. Rose, 5256 Halsted st

Therapeutic Resourcefulness vs. Nihilism.

Paper read before Southwestern Section of Chicago Medical Society by Charles Henderson Miller, Professor of Pharmacology, Northwestern Medical School, Chicago, Ill.

As a sequence to the rapidly accumulating knowledge of disease revealed by the study of Physiology, Bacteriology and Pathology, and to the reasonable belief that soon every disease will have a well-founded etiological basis as a cause and demonstrable organic lesion as a result, the study of Pharmacological problems is assuming today more importance than has ob-

tained before in the history of medicine. Of especial importance is that practical subdivision of the subject—Therapeutics.

The history of man's attempts to cure his ailments is coextensive with that of his origin. How deeply is the human interest excited when one contemplates the prehistoric man; today active, strong, exultant, happy in the possession of his faculties; tomorrow in pain, listless, weak and ready to die. The first dawns of reason taught him his first lesson in therapeutics in attempts to use certain plants as foods—this purged, that produced drowsiness, another acted as a diuretic. In his agony from inflamed wounds he sought the relief given by constant bathing the part in water.

Failing to find the specific hoped for, the intangible or spiritual basis of disease was advanced and the superstition of savages was born and still thrives among both ignorant and cultured.

As reason became more logical we may trace in the school of the Italian physician, Galen, a glimpse of the doctrine of signatures which saw in the fancied resemblance of a drug to the organ believed to be affected, the proper remedy, such names as Liverwort, Bloodroot, etc., still existing as examples.

As a legacy from the alchemists due to their search for the philosopher's stone, came many of our metals, their discoverers freely experimenting on their brother monks in determining their medicinal properties—Antimony from anti-Monk, deriving its name from its peculiarly fatal results to those experimented upon.

The Valentine School, or Spagirists, so recently as the fourteenth century, placing their faith wholly on metals in opposition to medicines of organic origin, exhibits the next epoch in the development of the science.

Added discrimination showed value alike in each, and the Allopathic School was the result composed of physicians clear-sighted enough to appreciate the value of medicines, and with the courage to employ them—their knowledge obtained in the same expensive and unsatisfactory school of experience in a clinical way, neither knowing or perhaps caring how they acted or where yet one may not deny that their results were on the whole good, enormously better than that of their predecessors. Here the shot-gun prescription flourished and empirical prescribing became occasionally so devoid of reason that in the inevitable reaction Hahnemannism was offered as a relief from the horrible doses and over-medication—since the cure had become in a fairly large proportion of cases a greater ordeal than the disease.

That disease tended naturally, oftentimes to self-cure was not at all recognized.

Hahnemann's tenets showed a reversion to previous types, with valuable additions, his first tenet being that disease was intangible, an unseizable something that must be combatted with similar weapons—to meet which he advanced the hypothesis that plants were equally endowed with extra material, or if you please, spiritual powers, and since disease was due to a perversion of the spiritual attributes of man, his working plan—the second tenet—was plainly apparent: it was *Similia Similibus Curantur*.

And in a peculiarly original way he harmonized his theory of treatment by claiming the power present in a drug to induce certain symptoms, was the index for its use; furthermore, it was the spiritual element residing in the plant which was effective in curing diseased conditions represented by symptoms and increasingly efficacious or "potent" the greater the attenuation.

His most important teaching—the third tenet—in the light of today was the importance of the regulation of the diet and the emphasis, passively given, to the fact that acute disease tends naturally to cure.

Disgusted by so much falsity of assertion by the divergent schools and enlightened by the observation of the many organic changes apparent in the study of gross pathology, they developed among certain members of the profession a school headed by Von Swieten and Skoda at Vienna in 1845, who professed little faith in the use of medicines. The unfortunate effects of their teaching still influences the faculty in Austria today, both in what seems neglect of the patient himself and in the backward state of reliable and elegant pharmacy and medicines.

These men, who did so much to perfect the methods of physical examination, were paradoxically the ones who have provided the means for accurate study of the action of drugs and the natural result—the rational indication for their use in disease.

The re-establishment of the science of Pharmacology on a reasonable basis dates from the discovery of morphine in 1817, the first of the active principles isolated—their definite chemical composition and purity allowing an accuracy of dosage previously impossible. With the advent of actual experimentation on animals, practical advancement has been evident, especially in correcting statements long passing current, but founded on clinical observation and resting on error. As an instance may be cited the long drawn out controversy whether alcohol was really a stimulant or always a depressant, is it ever a food or does it only conserve body tissues by being itself oxidized.

One is occasionally confronted by a colleague, usually a surgeon, who professes to believe but little in the efficiency or usefulness of drugs, notwithstanding the fact patent to us all that they almost without exception do employ them as never to be omitted aids, before, during or subsequent to any sort of an operative procedure.

We understand that disease in many of its manifold phases tends naturally toward recovery, but nature works as does the broad principles of constitutional law, such as comes under the jurisdiction of our supreme court; a multitude of minor ills, both in law and medicine require for their correction other mechanisms more flexible than such general natural laws.

Fever is doubtless a conservative act of nature tending to cure, but if it, in an individual case, rises to an extreme height, may defeat its object by destroying the patient. If we, by the use of thoroughly understood medicines used as antiseptics, prevent the infection and the development of the fever, or by others regu-

late the heat production and expedite the heat liberation functions, we are saving life, and with medicines. Again, if by administration of cinchona we can prevent the development of a generation of Laveran's plasmodia, with its exhausting chill and pain and fever, it is certainly an advance over putting the patient to bed to fight it out by nature's method the best he may.

But you say with a certain few remedies, their value may be admitted, though the mass of them are worse than useless. From my point of view this admission clears the way for a consideration of the whole subject. The following are axiomatic:

1. Every known substance, when introduced into the human body, will produce a reaction.

2. This reaction may be beneficial, innocuous or detrimental, and is consequent on: a. The substance. b. The amount. c. The individual. d. The manner of use.

3. Expert ability to use substances as remedial agents is proportioned to the individual's knowledge of axiom.

Keeping these axioms in mind, perhaps their consideration may help to explain the true source of whatever nihilistic beliefs may exist.

Medicinal substances: The physician must know what he is giving. At the outset I fancy this will silence a not inconsiderable number of complainers, because of the widespread prevalence of the proprietary medicine habit. In the great majority of instances, their use is empirical therapeutics pure and simple.

Before one should expect to prescribe a drug he may be reasonably expected to know: 1st. What is the active principle or principles? 2d. What are the other constituents and quantity? 3d. What solvents best extract each? 4th. How permanent are the preparations? 5th. And more important than all, what effect does each proximate principle produce on the various symptoms of the body in health, and what difference may be expected in disease?

It would hardly seem necessary to substantiate these requirements, for one drug may possess active principles quite opposed, physiologically to each other; either may be selected by the use of the proper method of preparation and to the exclusion of other constituents which may impair its reliability or keeping quality. The permanency of medicines is often overlooked. Hydrocyanic Acid, a valuable remedy and deadly poison, may speedily become as inert as water. So essential is this question that not a few believe it best to adhere completely to the use of active principles, to the total exclusion of preparations containing all the virtues of the drug but in less exact or unknown proportions.

In the way of accuracy this plan has everything to recommend it, but is really impractical at present, owing to our possession of valuable drugs such as Digitalis and Veratrum Viride, whose principles are not obtainable in form, as reliable in strength as the fluid preparations. Another objection is the great activity of many active principles like Aconitine, which really adds somewhat to the danger of their use, and finally, since they are usually crystalline, their absorption effect and excretion is quicker,

necessitating greater care in adjusting the administration when continuous action is desired.

With a thorough knowledge of the drug used, the therapist will still require a high degree of judgment as to the amount of the remedy he should use, which induces single, daily and continuous dosage. If the patient is suffering from a terrific headache due to toxæmia consequent on Acute Tonsillitis, you may be very happy in your selection of Sodium Salicylate and Phenacetin to combat it, but if you give 3 grains of each 3 times a day, you will fall far short of your opportunity to relieve him speedily; such a case requires full dosage at frequent intervals. Again, when you are called upon to treat a tertiary periostitis, an opportunity has come to you to bolster your faith in therapeutics, but you must grasp it by giving the proper amount of your medicines, otherwise you can fail; success often depends on your ability to get your patient to take and retain the amount necessary.

Conversely trying to cure a case of tuberculosis with Anorexia by adding disgusting mixtures to combat half a dozen incidental conditions only add to the loathing of food and stifle still more his struggle against fearful odds.

The individuality of the patient, his natural bias or temperament perhaps accentuated or reversed by his disease, calls for the nicest calculation in the selection of medicines. A rule often lost sight of should be noted: The more refined and exquisite the mental development the greater the susceptibility to medicines influencing the nervous system, and the less amenable to those acting on the nutritional systems, digestion, assimilation and excretion. Passing the various symptoms in review, one should seek to evolve a composite picture by mental analysis, which carried to its logical result would lessen the frequency of the statements we often hear: Doctor, I can't take that medicine, it goes to my head or hurts my stomach or makes pimples come out, etc.

The manner of use of remedial agents—under this we may sum up and apply all we know of a remedy with the most efficient and elegant preparations, of its actions in various doses, on the most widely differing individuals suffering from all manner of diseases, each exhibiting some clinical difference from the last patient with what passes for the same disease. Indeed, it is superfluous for us to attend to this summing up, except for our improvement for the laity who watch us at the bedside do this whether we will or no; for our manner is but the reflection of the grasp we have on the case considered Etiologically Diagnostically, Prognostically and Therapeutically.

At best we cannot prolong life indefinitely, but this should not allow us to underestimate our life-saving and pain-alleviating opportunities.

Compare the patient's chances in a case like the following: A resourceful physician with his well-filled, carefully selected emergency bag with various antidotes and instruments for treating poisoning cases, all in a state of readiness for immediate use, with another physician accidentally present at a poisoning case, but

with everything two miles away. The state of mind of each physician in such a case will be apparent to you and is a positive demonstration of the reliance which we may put in our resources. The contrast in such a case is more intense, but my most severe critic must sanction the state of preparedness, and if valuable here, it is also true in other cases, though time may be of not so great moment. Another example: Two physicians, simultaneously summoned to what proves to be a serious case, and both are requested to remain and treat the case jointly. One man suggests, say, twice as many procedures to be carried out, and each are rationally indicated on recognized grounds, which are logically explained by him.

I am free to confess that more than once I have been chagrined because in consultation suggestions have been offered, the wisdom of which could not be denied and which I should have employed. And further, I will say that it is comparatively rare with me as I scan the copy of a just written prescription, as I try to again predicate its effect as ordered and consider wherein it might have been improved, either along the line of substance, amount or manner of use; that I am satisfied with it.

The man who writes a prescription has no justifiable right to direct its administration except he is able to state with a fair degree of exactness what he expects the medicine to accomplish and how it is to be brought about.

There remain at present comparatively few drugs—such as Colchicum—of which we are unable to explain how they act, or to speak quite within the facts, few or none, but we know much of their actions on the various bodily systems.

The same accuracy of knowledge that enables you to prevent an ascending pyelonephrosis from a septic cystitis by ordering Urotropin or curing an acute eczema by use of Emollients and proscribing the use of water, should be met on an equally rational basis whenever you prescribe.

It is folly to say you are not provided with the weapons, for individually we know so little of those we have.

First you must get the notion out of your head that there are any specifics; the manner of use must always be reckoned with.

Let me mention a few trite examples without which I hardly see how the suffering ill could get along:

- Mercury in Secondary Syphilis.
- Iodine in Tertiary Syphilis.
- Quinine in Malaria.
- Ammonium Salts in Bronchitis.
- Opium for Pain.
- Salicylates in Rheumatism.
- Aconite in Fever.
- Belladonna in Eye Diseases.
- Digitalis in Heart Disease.
- Strychnine as a Vital Stimulant.
- Alcohol in Continued Fevers.
- Adrenalin as a Vaso-Constrictor.
- Male Fern for Taenia.
- Santonin for Ascarides.
- The Nitrites in Angina.
- Iron in Anaemia.
- Bismuth in Gastro-Enteritis.

- Tannic Acid in Diarrhoea.
- Chloral for Insomnia.
- Apomorphine as an Emetic.
- Coaltar Analgesics in Neuralgia.
- Ergot in Obstetrical Practice.
- Arsenic in Skin Diseases.
- Calomel in Bowel Complaints.
- Cocain as Local Anesthetic.
- Chloroform and Ether as Anaesthetics.
- The Saline Cathartics.
- Sulphur in Scabies.
- Iodoform in Pus Infections.
- Sodium Bicarb. in Hyperacidity.
- Carbolic Acid as Anti Pruritic.
- Hydrochloric Acid in Dyspepsia.
- Formaldehyd as a Disinfectant.
- Stramonium in Asthma.
- Hydrogen Peroxide as an Antiseptic.
- Theobromin as a Diuretic.
- Camphor as Restorative Stimulant.
- Thyroid in Myxoedema.
- Pilocarpin to Induce Sweating.
- Mustard as a Counter Irritant.
- Ichthyol in Inflammations.
- The Bromides in Epilepsy.
- Antitoxin in Diptheria.

Here let it be said that the substances, while mentioned for but one thing, are frequently invaluable in many other conditions. While Belladonna is unequalled to maintain paralysis of the accommodation, it is equally the most efficient respiratory stimulant, excellent to prevent painful action of purgatives, the standard remedy in nocturnal enuresis, and finally the only known remedy possible of hypodermic exhibition which stimulates the heat center in shock.

Without exception, every remedy may have from three to eight rational uses, proven by its known actions determined experimentally and clinically.

Is it sufficient to know how to use the forty-four drugs mentioned? Assuredly not. There are treble the number which possess individual advantages that may harmonize in a certain case and become doubly efficient.

Often you had better use Castor Oil than Calomel. Rheubarb and Magnesia is often mentioned as the best remedy in habitual atony of the bowels.

You must know of Acacia to emulsify your oils and, of Oil of Theobroma before you can elegantly prescribe for Haemorrhoids.

I regard it nearly as essential for a physician to know of the properties of Sassafras Tea as if he intended to prescribe it, and you will be daily asked regarding the value of domestic remedies or to identify one medicine like Salts from Soda or Borax.

But I have yet to consider the extra medicinal resources of the medical man—where in fact the true physician chiefly excels.

It is true that it indeed requires a thoroughly trained mind and mature judgment to scientifically and rationally prescribe medicines, to aid this function here, depress that there, to stimulate, to nourish and conserve the strength by alleviating pain and promoting sleep, but it requires even a higher gift to so inspire your patient with that ideal confidence due to the ability to suggest and have followed by pa-

tient and nurse the hundred and one little things which convert a sick bed from one of great distress to one of comparative comfort.

I believe a sincere appreciation of the patient's suffering is the first essential to obtaining a state of mind requisite for a skillful physician. It should be his purpose to employ a nurse whose sole duty is to care for his patient even though the affair may terminate in a week; the cost may be readily adjusted to the family purse from \$5.00 to \$25.00 a week. A poor nurse is better than none—they must all be taught—then methodically employ her in ministering to the patient's comfort, preparing appetizing foods, daintily served, maintaining an accurate record, so valuable in the early detection of complications, in the prevention of contagion and infection, and if possible, as an educating force in the family along lines of cleanliness and an object lesson in the care of the sick.

Consider two pictures: Two homes, similarly located, likewise the household arrangements; the fathers earn \$18.00 weekly each. Each have other children, and in each an eight-year-old child sickens with scarlet fever. In the first the doctor correctly diagnoses the illness, prescribes a fever mixture to be given in teaspoonful doses every few hours and an antiseptic for mucous membranes, to be employed several times a day. The child lies in the back bedroom. After giving orders for the other children to be excluded from the room, he says he will call tomorrow. The poor mother gives the medicine and attempts to clean the nose and throat, then nurses the baby and attends to her other manifold duties; the child, half delirious from fever, suffering from severe headache, vomits on the floor and distress, reigns. At one of his visits the doctor sees portions of his medicine on the table and bedding; the laxative ordered, ineffectual, why, he may not know, since he cannot tell whether the child got it or not. He orders an enema, but must administer it himself. The nasal cleansing has been attended to, but imperfectly, since the child is not docile; cervical glands swollen and patient shrieking with earache. The doctor drops in some sweet oil and laudanum, and after telling the mother to place a hot flat iron to the ear, makes good his escape. His instructions as to liquid diet have been observed as the smeary, half-filled glass of milk affording nourishment to a swarm of flies readily testifies.

A few days later, on his call, the doctor finds his patient out in the yard, and he relieves himself by a coarse remonstrance to the poor mother for allowing what she was powerless to prevent. Promising to keep the child in, she is told to grease him well, so the "scales won't fly," prescribes a solution to syringe out the ear, now discharging freely. Three days later, when he purposes discharging the patient, the mother informs him the child's urine is red, and he has a hemorrhagic nephritis with oedema to treat. Child is put back to bed alongside of a sister now down with the disease, and now the mother attempts to care for both. Finally one recovers with chronic otitis media, the other with persistent albumi-

nuria, both outside the pale of life insurance benefits. The mother exhausted from double labor and quadrupled anxiety, the balance of the family irritable and distressed from six weeks of wretchedness and worry.

In the other the diagnosis was also correctly stated at the first visit. After carefully explaining the probable course and dangers, he requests the employment of a nurse to carry out his instructions. The sunniest bedroom in the house is cleared for a sick room, and a cot for the nurse arranged. After a colonic flushing and tub bath, the child is placed between clean sheets with plenty of fresh air provided, the door is guarded by a sheet moistened occasionally with a whisk broom, using the solution of calcium hypochlorite, which in a bucket is used for disinfection of discharges. The physician's gown hangs on the clothes line in the sun in the day time, and which he assumes when visiting the case. An aconite and refrigerant saline fever mixture is given every half hour at the outset, until the pulse comes down to 80 and the skin becomes moist; one-tenth grain calomel tablets every hour until a grain has been given; an ice-bag to the head and frequent water and alcohol sponging reduces the temperature, quiets the patient and alleviates pain. A few teaspoonfuls of a solution of chloral is available for use at night to quiet, if required. Every two or three hours, diluted peroxide of hydrogen is allowed to trickle down either nostril, and more is given to gargle and swallow. Cracked ice in rubber over flannel is applied to the brawny neck. Now the nurse brings milk, now lemonade, now water, following out instructions to encourage the taking of large volumes of liquid. Now the patient's teeth are being cleaned. Now the nails and hair are being dressed. Each urination is tested with a few drops of Esbach's reagent to detect the first sign of renal involvement. What occurs and when is carefully noted in the history. At one of his visits the record shows a rise in temperature, and it also shows the patient has mentioned a little pain in one ear. An hour-long hot douche is ordered gently playing against the inflamed drum, repeated at three-hour periods, with coincident administration of one dram doses Sal Rochelle hourly until freely acting as a depletive. After twenty-four hours the congestion subsides and the pain disappears. The urine remains limpid and plentiful, without abnormal constituents, owing to the large amount of fluid administered.

Now, as the fever declines, perfumed cocoa butter is applied universally after the alcohol rub twice daily. Appetizing foods, prepared by the nurse on a little gas stove set up in the sick room, engage both her and the patient's attention and while away the tedium of convalescence. When the linen is changed, that soiled is packed in a pillowslip and carefully scalded in a bucket before being further laundered.

Fourteen days from the onset recovery is practically complete; the nurse is now dispensed with, the habits of patient and family now formed render the remaining few days' seclusion easy of accomplishment. Finally the last

bath and the Foramldehyde disinfection and renovation of the room terminates the case.

The mother, not half sick, her work not at odds and ends, the family (and probably some neighbors) have learned the value of medical resources, and they will honor the physician because he relieves them as well as their child.

A physician must be able to take the initiative and require a perfect acquiescence on the part of nurse and family. Doctor means teacher. He will so conduct himself before patient, nurse and family, equally free from familiarity or stiffness, that when he has dismissed the case, whether the termination be favorable or the reverse, the memory of the illness will cling to the family not as a mind-destroying distress and a wretched attempt to get along somehow, but rather as a pleasant picture, where a clean, cheerful nurse constantly in service carried out the instructions of a skilled physician who, in a methodical manner, brought every resource known to his profession, medicinal and otherwise, to his patient's aid—his teachings and example worthy to be remembered, his departure not an unmixed blessing and his reward certain confidence, unflinching gratitude and undoubted professional success.

The following have become members of the Chicago Medical Society recently:

Albrecht, Chas. A., 729 S. Halsted st.
 Anderson, Carl H., 103 State st.
 Bahrenberg, L. H. P., U. S. Marine Hospital.
 Banks, C. E., U. S. Marine Hospital.
 Beck, John, 126 Oak st.
 Biehm, J. F., 4023 Wabash ave.
 Black, Arthur D., 31 Washington st.
 Blayney, Fred H., 576 W. Madison st.
 Bosler, Arthur B., 929 W. 63d st.
 Brown, Edward V. L., 100 State st.
 Brown, Roy E., 103 State st.
 Buzik, J., 829 Milwaukee ave.
 Campbell, Wm. A., 34 Washington st.
 Clark, Jennie B., 1311—103 State st.
 Damm, E. F., 85 Rush st.
 Danforth, Wm. C., Cook County Hospital.
 Davis, W. H., 133 State st.
 Derdiger, Aria Louis, 772 Jackson Boul.
 Drucek, Chas. J., 4801 St. Lawrence ave.
 Egan, Daniel, 2908 Archer ave.
 Farquharson, H. M., 34 Washington st.
 Flatmann, A. W., 990 W. 22d st.
 Francis, Frank D., Cook County Hospital.
 Franklin, Isaac J., 293 W. Division st.
 Frutchey, Foster, 281 E. North ave.
 Gaudtner, Chas. P., 103 E. Adams st.
 Goldberger, H. C., 868 E. 50th st.
 Green, Ralph E., 550 Wilson ave.
 Hammond, H. R., 659 W. 12th st.
 Harris, H. D., Cook County Hospital.
 Harvey, P. F., Col. and Ass't Surgeon Gen'l, Pullman Bldg.
 Lamb, O. C., 9151 Commercial ave.
 Lane, Francis A., 103 E. Adams st.
 Lamoreaux, E. L., 910—103 State st.
 Larned, E. R., 5751 Prairie ave.
 Leonard, R. L., 312 La Salle ave.
 Lloyd, Richard, 2639 S. 42d ave.
 Luckhardt, A. E., 443 La Salle ave.

Lyon, James H., 4101 Calumet ave.
 McPherson, P., 2601 S. Halsted st.
 Mastin, Chas. V., 3901 Cottage Grove ave.
 Meling, Nels C., 952 Armitage ave.
 Mitchell, T. B., 2012 Lexington st.
 Moorhead, J. J., 6058 Halsted st.
 Moore, E. S., 291 Ashland Boul.
 Mowrey, Albert E., 3505 Indiana ave.
 Murphy, D. E., 74 Fullerton ave.
 Naffz, Edwin S., 2904 Archer ave.
 O'Brien, G. G., 9215 Commercial ave.
 Orcutt, D. C., 804 Stewart Bldg.
 Osbaldeston, Julian T., 2934 Cottage Grove ave.
 Patera, F. J., 675 W. Taylor st.
 Riebel, Ernest C., 711 W. 43d st.
 Reitman, B. L., 3756 Elmwood ave.
 Reynolds, Geo. W., 445 W. Madison st.
 Roberts, U. S. Marine Hospital.
 Santee, Harris E., 770 Warren ave.
 Schmauch, G., 6300 S. Halsted st.
 Smith, Jos. F., 1070 Harrison st.
 Stewart, Robert, 3457 State st.
 Stober, A. M., Cook County Hospital.
 Stulik, Chas., 586 So. Central ave.
 Stubbs, James E., 32 State st.
 Szwajkart, Adam, 658 N. Ashland ave.
 Thomas, John H., 360 Blue Island ave.
 Thompson, Wm. M., 100 State st.
 Thorsgaard, Karl L., 103 State st.
 Van Dyke, G. H., 185 Hastings st.
 Vary, Wm. H., 26 Wells st.
 Vasumpaur, J., 1624 W. 22d st.
 Volini, Camillo, 388 S. Halsted st.
 Webber, Blanch E., 31 Washington st.
 Wilkinson, Lucette, 2053 Ogden ave.
 Wolfson, L. H., 28 33d Place.
 Wuerth, J. J., 143 35th st.
 Xelowski, T. Z., 634 N. Rockwell st.
 Younger, C. B., State and 39th sts.
 Zapfee, Fred C., 1764 Lexington st.

TO BE PATHOLOGIST AT MANILA.

Dr. Maximilian Herzog of Chicago Receives Appointment to Government Laboratory.

Dr. Maximilian Herzog, for more than seven years professor of pathology and bacteriology in the Chicago Policlinic, a postgraduate medical school of Chicago, has been appointed pathologist in the bureau of government laboratories at Manila.

Dr. Herzog is a native of Frankford-on-the-Main, Germany. After having been a student at the universities of Glessen, Strassburg, and Marburg, he came to this country in 1882, and worked as a newspaper writer for German dailies in St. Louis and Cincinnati. In the latter city he studied medicine and was graduated from the Medical College of Ohio in 1890. He came to Chicago in 1894. In 1896 he was appointed professor in the Chicago Policlinic, which position he still occupies.

Dr. Herzog is the author of a large number of medical papers and essays published in the medical periodicals of the United States, Germany, and France. He will probably sail from San Francisco on December 30.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

INDEX TO ADVERTISEMENTS.

	PAGE.		PAGE.
Abbott Alkaloidal Co	IX	Illinois Medical College	XVII
American X-Ray Co.....	IV	Jerseyville Sanitarium	VI
Armour & Co	XI	Kress & Owen Co	XII
Broadwell, Stuart	XVI	Maplewood Sanitarium	XX
Breitenbach, M. J. & Co.....	VII	Meyer & Co., C. F.	XII
Colegrove, E. H. & Co., Books	XV	Michigan Medical Journal	XIX
College of Phy. & Sur., Chicago	XIX	Milwaukee Sanitarium	XV
Chicago Eye, Ear, Nose and Throat College ..	II	N. Y. Polyclinic	IV
Chicago Polyclinic & Hospital	XX	North Western University Med. School ..	IV
Cincinnati Sanitarium	XVIII	Parke Davis & Co	XXII
Columbus Medical Laboratory	XX	Polk's Medical Register	XVII
Crittenton, C. N. Co.....	X	Post Graduate Medical School of Chicago ..	XVIII
Decatur Drug Co	XVI	Presbyterian Hospital of Chicago.....	II
Denver Chemical Mfg. Co.....	VIII	Purdue Fredrick Co	XXI
Dodds, R. N	XVII	Rush Medical College	X
Fairchild Bros. & Foster.....	X	Sharp & Smith	XVI
Fanshawe Handecker Apron Co	XX	Springfield Mattress Co	XVIII
Fellows Syr. Hypophos. Co	XX I	Truax Green & Co	XVI
Finsen Light Inst., Chicago	V	Victor Electric Co	XIX
Gardner Barada Co	II	Wagner R. V. & Co	XIII
Herzog Laboratory	XVII	Western X-Ray & Coil Co	XIV
Illinois Central R. R. Co	XV	Whitford, Wm., Medical Stenographer ...	XX
Illinois State Journal Co	XVII		

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

ADRENALIN AND ITS USES IN GENERAL SURGERY.

Under the above title an article appears in the October issue of the *Indian Medical Gazette*, from the pen of Harry Gidney, F. R. C. S., (Edin.), D. P. H. (Camb.), etc. The author finds that "the clinical usefulness of Adrenalin is very great and extensive, and owing to its power of rapidly and effectively producing vaso-motor constriction, it is adapted to the treatment of all inflammatory conditions. The drug is also of extreme value in arresting hemorrhage during all surgical operations. It is indicated whenever and wherever any local hyperaemia exists, more especially in inflammations of mucous surfaces such as those of the eye, throat, larynx, pharynx, urethra, bladder, nose, rectum, vagina, uterus, stomach, etc. It is used not only to stay hemorrhage when it exists, but also as a preventive or controlling remedy, given either internally or externally prior to an operation, so as to lessen the amount of bleeding during the performance of that operation. It is a non-irritant to mucous membrane unless when used too frequently and in excess.

"On reading the literature on the subject," says the writer, "I find that Adrenalin is admitted to be the most powerful and rapid cardiac stimulant and tonic we have, being chiefly used

in cardiac affections, haematemesis, hemoptysis, hemophilia, hematuria, menorrhagia, post-partum hemorrhage, purpura, scurvy, etc. It is said to be the most rapid restorative in chloroform and other forms of anesthetic syncope, and in such cases it is advisable to administer it intravenously."

The author reports the results of several operations, major and minor, in which Adrenalin was employed. The first case was one of fracture of the vertex of the skull. As one of the larger branches of the middle meningeal artery had been torn there was profuse dural hemorrhage and capillary oozing which were controlled by the use of the 1-1000 solution. In the second case, one of hemorrhoids, profuse bleeding was checked by the rectal insertion of a plug of cotton wool soaked with Adrenalin Chloride Solution.

The third case was one of skin grafting in which the author tried pressure to stop the capillary bleeding. As the procedure was somewhat tedious he applied Adrenalin Chloride Solution with almost immediate cessation of all oozing, and what is usually a lengthy and sanguinary operation was converted into a short and comparatively bloodless one.

The fourth case, one of hemorrhage after the extraction of teeth, and the fifth, which appears

to embrace the author's experience in a number of cases of epistaxis, afforded additional opportunity to test the hemostatic effect of Adrenalin.

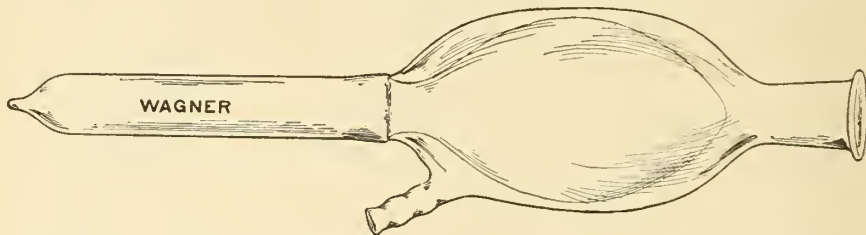
In case six a post-partum hemorrhage was checked by swabbing the uterine cavity with Adrenalin Solution, while the same happy result was obtained in a case of secondary hemorrhage following an operation for the relief of a mammary abscess.

The author has found that the instillation of a 1-5000 to 1-2000 solution of this drug reduces the inflammation and considerably cuts short the process of conjunctivitis. He usually applies it (diluted) over the inflamed parts by means of a soft camel's hair brush. He always uses the preparation containing Chloretone, which has a decided local anesthetic action relieving much of the photophobia and pain. He is fully convinced of the power of Adrenalin to arrest or lessen the bleeding that arises from the cut ends of the iris after iridectomy. He speaks highly of its efficiency in chemosis, cataract operations, evisceration of the eyeball, operations for ectropion, symblepharon and trachomatous pannus.

The author concludes that in all cases of minor surgery in which it is desired to arrest bleeding from any cut or exposed surface we have in Adrenalin a most useful, powerful and rapid drug—one that is non-poisonous, non-irritant and non-accumulative, especially in operations upon the conjunctiva and eyelids.

THE HUGHES IONIZER.

Described by R. V. Wagner, M. D., 308 Dearborn st., Chicago.



This instrument is excited in the same manner as a high frequency tube. The vacuum tube acts inductively upon the air and such substances as may be held in suspension by it while passing through the chamber between the inner and the outer bulb. The inner bulb is exhausted and the outer bulb merely forms an air chamber around it. The outer bulb is provided with a nipple to which a tube leading from a nebulizer or other apparatus for medicating the air may be attached. The opening to which the mouth or nose piece is to be attached is made like the neck of a bottle, so that a rubber cork to which any desired shaped attachment may be made can be used, and when removed will leave the instrument all glass, so that it can be washed, boiled or otherwise cleaned.

The inductive action arising from the extremely high mode of motion imparted to the rarified air of a vacuum tube, produces a much finer disintegration or decomposition of the substances acted upon than a direct discharge of current passed through substances or than

an inductive action arising from metallic bodies. It is on account of the absolutely perfect decomposition of the air and substances held in suspension by it when acted upon by this instrument, as above described, that is called an ionizer. The molecules being broken into atoms and the atoms into ions. The main advantage, however, of the peculiar construction of the Hughes Ionizer is that it affords a perfect means of neutralizing the acid effects of decomposed nitrogen. If the air acted upon by it be made to carry in suspension, by means of a nebulizer, some medication of an alkaline character, the acid effects of the decomposed nitrogen combining with the hydrogen is entirely neutralized. The remedies held in suspension by the air, as produced by a nebulizer, are much more finely subdivided thus rendering them more efficient in the treatment of the air passages.

The cloud of vapor produced by a nebulizer is more than doubled by the action of the Ionizer.

This Ionizer may also be connected to a tank of pure oxygen gas instead of a nebulizer and pure ozone, without nitrogen, may be used. Altogether, it is a very simple, very efficient instrument and will be found much more practical and effective in therapeutical work than ozone generators, such as are now in use.

One of the best ways to use the ionizer is to connect it to one terminal of a high frequency apparatus (a static machine running at high speed so as to produce a high frequency current) in the same manner as the high frequency

tubes are attached; allow the patient to grasp the double bulb of the ionizer in one hand and regulate the strength of the current so as to produce slight electrical sensations to the patient when the air may be sucked through the Ionizer, directly or indirectly, through any medication. Or the air may be forced through from a nebulizer or atomizer.

The Medical Examiner and Practitioner, issue of May, 1903, says:

Positive Results.

As far as positive results are concerned it is safe to assert that no preparation of iron ever introduced to the medical profession has met the requirements to the extent that the pharmaceutical product, Gude's Pepto-Mangan, has done. Unlike many articles claiming to be "Just the same," or "Just as good," it has stood the test of years in the hands of the practitioner, and has been submitted to the severest clinical investigations by eminent men in the profession, both in hospital and private practice.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. {
No. 8. }

Springfield, Ill., January, 1904.

{ SUBSCRIPTION
\$3.00 A YEAR. }

HERNIA OF THE OVARY, APPENDIX AND DIVERTICULUM WITH ABSCESS.*

BY CARL E. BLACK, M. D., JACKSONVILLE.

The following case is presented on account of some points which are apparently of unusual interest. The patient was a woman, age 40, married, and the mother of six children. She is of Swedish parentage, very intelligent, but always had to work very hard.

I was first called to see her in the night. She gave the following history: Had been subject to attacks of pain in the right inguinal region accompanied by the appearance of a small tumor. This tumor was evidently a hernia. This was the first time that she had called a doctor on account of the attacks. She had learned by experience that by lying on the back with the hips elevated the tumor would disappear, and within an hour or two the pain would also subside.

The present attack began in the early morning in the usual way, but did not yield to her habitual plan of treatment. The pain had grown steadily worse until it became unbearable and demanded the services of a doctor. Examination showed a small inguinal hernia which was exceedingly tender to the touch and could not be manipulated. It had persisted for eight hours. During that time the bowels had moved freely. After trying several measures of posture and taxis without success, an anaesthetic was administered and after considerable general manipulation a part of the tumor disappeared. After the patient recovered from the anaesthetic, however, she was not completely relieved and a part of the tumor remained. She said that heretofore the tumor had entirely disappeared.

She was removed to the Hospital the next day, but by that time she thought she was

improving and refused to consider operative interference. By the second day she was still further improved and sat up. She said that she thought she would be entirely well in a few days. However, the small tumor which was tender and somewhat painful did not disappear. The pulse and temperature remained normal throughout the whole attack. On the fourth day she was up and around the Hospital, and said that with the exception of slight tenderness she was entirely well and insisted on going home the next day.

I finally, with the assistance of friends prevailed on her to submit to an operation for radical cure, assuring her that to go home would only mean a repetition of the attacks and finally bring her to operation. It was my opinion that a small portion of omentum had become entangled and adherent in the hernial sac and could not be reduced.

She finally consented and operation was undertaken. At this time as throughout the attack the temperature was normal and the pulse 72 and of good quality. After careful preparation an incision was made over the small tumor in the line usually adopted in operating on inguinal hernia. The sac was examined and opened. It contained a small mass about the size of the end of one's thumb which evidently did not belong to any of the structures usually found in inguinal hernias. It had somewhat the appearance of omentum which had been much changed by inflammatory action. It could not be differentiated immediately. Passing the finger around behind this mass to loosen it up a considerable cavity was accidentally encountered from which a quantity of dark and very offensive pus was discharged. This cavity was carefully cleansed with peroxide of hydrogen and hot normal salt solution.

After getting rid of all the pus the walls of the cavity were carefully examined with the finger. On the upper side the finger encountered a soft projection into the cavity

*Read at 53d Annual Meeting, Chicago, May 30, 1903

which had somewhat the form and feeling of the finger of an old kid glove. Its distal extremity was entirely free but closed. This was Meckel's diverticulum. Its walls had begun to undergo necrotic changes. The portion of gut from which it sprung was loosened up and an effort made to remove the diverticulum and close the opening. The walls of the gut itself were in such bad condition from contact with this pus cavity that it was impossible to make the sutures hold and thus close the opening from the diverticulum. This necessitated the removal of several inches of the intestinal wall in order to secure healthy tissue for making a closure of the gut. About six inches of gut were resected and an end to end anastomosis made with the Murphy Button.

Further examination of the cavity showed at the bottom, on the right side, an inflammatory mass which when loosened up proved to be the vermiform appendix. The end of the appendix was gangrenous and ruptured. The appendix was removed in the usual way. Returning now to the original small mass which formed the visible small tumor and loosening it up and following it to its base, demonstrated it to be the right ovary. The fallopian tube was lying just below it and next to it. The end of the tube was also gangrenous from lying in the pus cavity and the ovary was so disorganized from long pressure that it was necessary to remove both tube and ovary.

On account of the septic nature of the cavity it was deemed best to establish through and through drainage. Consequently, an opening was made behind the uterus and drainage gauze passed through into the vagina. The external wound was partially closed. No doubt this through and through drainage had much to do with the rapid recovery which the patient made. During the five days which I observed the patient prior to operation she had no rise of temperature or acceleration of pulse, nor was there any material rise of temperature or acceleration of pulse following the operation.

Thus what seemed to be a small incarcerated hernia proved to be a hernia of the ovary overlying a gangrenous appendix with walled off abscess; the walls of the abscess

cavity being made up of the cecum, the ileum and the right tube and ovary with Meckel's diverticulum protruding into the cavity. The patient made a very rapid and complete recovery, although she has to wear a truss on account of the weakened inguinal region. This case brings up the query as to whether or not a careful vaginal examination would not have aided in clearing up the diagnosis, or at least in putting us on our guard somewhat as to the complications. However, it seemed entirely unnecessary on account of the plain history which the patient gave of hernia, and from the fact that she had no rise of temperature or acceleration of pulse or other symptoms which would indicate an inflammatory condition.

It is somewhat of a puzzle to know just how this case should be classified. My own idea is that it was originally a case of hernia of the ovary. This is a rare condition. Howard Kelly in his work on "Operative Gynecology," reports to have seen only two cases. There is one point which should put one on his guard: namely, the extreme sensitiveness of the tumor. This is a diagnostic sign which should not be overlooked. Another important symptom of cases of hernia of ovary is increased pain at the menstrual period and the enlargement of the tumor at that time. These symptoms were not present in my case. Kelly would seem to believe, although his wording is not quite clear, a hernia of the ovary and tube is always congenital but that we may have an acquired hernia of the tube.

Hernia of the appendix is by no means as rare as hernia of the ovary. I have myself encountered the appendix three times in hernias. Twice in femoral hernia and once in inguinal hernia. A large number of observers have reported cases of hernia of the appendix. Mr. Eckles has published twenty-nine cases, sixteen of which were inguinal and thirteen femoral. Two of the inguinal hernias were on the left side. In only two of his cases was the appendix accompanied by other viscera. Combining the statistics of several reporters it would seem that the appendix is found in sac in about 11% of cases of hernia. The presence of Meckel's diverticulum is of course much more rare.

It consists of the vitello intestinal duct, which has become absorbed, but persists as a part of the small intestine. The blind pouch thus formed is known as Meckel's diverticulum and may vary from a mere pit on the intestinal wall to six inches in length.

In this case the diverticulum was about nine inches from the cecum and was about $3\frac{1}{2}$ inches long and about the size of one's little finger. There seemed to be no narrowing of the lumen of the gut at this point, and I regard the presence of the diverticulum as simply an incident of the case. It had lost its terminal ligament and was entirely free in the pus cavity.

Analyzing the case more specifically it was evidently one of hernia of the ovary and if Kelly's theory is correct, was of congenital origin, this was complicated by the presence of the appendix which became gangrenous, ruptured, and produced the usual appendiceal abscess in the hernial opening. The presence of the diverticulum was only an incident. The disorganization of the diverticulum and intestinal wall was caused by the contact with the abscess caused by the ruptured appendix.

THE INDICATIONS FOR THE USE OF THE TAMPON IN THE TREATMENT OF POST-PARTUM HEMORRHAGE.*

BY C. S. BACON, M. D., CHICAGO.

During the last few years the use of the intra-uterine gauze tampon in the treatment of post-partum hemorrhage has become quite general until now tamponade is often employed indiscriminately for all kinds of hemorrhage following labor. Its prophylactic use has indeed been recommended for cases where for any reason a hemorrhage may be anticipated. I believe there is a tendency toward the excessive use of this method of treatment. Unless a tampon be sterile and its introduction aseptic it is likely to cause a serious infection. The technic of a proper intra-uterine tamponade is not so extremely simple in the urgency of a frightful hemorrhage especially when one is without a

good assistant. Hence it seems to me desirable to consider anew the treatment of post-partum hemorrhage so far as necessary to determine the proper place for this popular therapy.

All post-partum hemorrhage is due of course to rupture of vessels and so in a sense is traumatic whether the vessels are in the placental site or in a lacerated cervix or vagina. However, since the rupture of the placental vessels is necessary and physiological while laceration is not we may call hemorrhage from the former non-traumatic and from the latter traumatic.

The term non-traumatic hemorrhage comes to include hemorrhage due to a variety of causes some of which have not received sufficient attention from most writers in the past. In a paper read before this Society at its Quincy meeting last year I enumerated the most important factors contributing to non-traumatic hemorrhage. They were: 1st. Lack of normal vascular contractility; 2d. Deficiency in coagulability of the blood either inherited or acquired; 3d. Partial or complete failure of the uterine muscles to contract and retract and thus close the uterine vessels. This failure may be due to weakness or exhaustion of the muscles or to inactivity of the intra-uterine ganglia. The whole musculature of the uterus may be affected or limited areas like the placental site or the lower uterine segment alone may be involved; 4th. Temporary increase of blood pressure, such as for example might be caused by mental excitement.

Without repeating again the study of each of these factors I will only remind you that any or all of them may also influence or complicate traumatic hemorrhage especially that from the cervix. For example a hemorrhagic diathesis will of course affect the hemorrhage from any laceration.

Now let us consider the means of counteracting each of these factors with especial reference to the advantages or disadvantages of the tampon. It is presumed that all hemorrhage is permanently stopped by the closure of the ruptured vessels with permanent clots. It must also be noticed that a lasting mechanical compression of the vessels by means of a tampon is hardly pos-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

sible within the uterus. If we should rely upon mechanical compression alone more than 100 yards of gauze would be required to distend the uterine walls and mechanically close its bleeding vessels. We must rely on the contractility of the uterine muscles. In tears of the cervix and vagina it is perhaps possible to make sufficient pressure with a tampon to close ruptured vessels. This is true at least of small vessels and furnishes an indication for the use of the tampon as we shall see when we come to speak of traumatic hemorrhage.

I do not know that the presence of gauze in the uterus causes its vessels to contract. The presence of hot water of a temperature of 120° will have this effect. The local application of astringents and adrenalin has the same action. This is also the action of ergot administered internally. The contraction of the vessels is of course an important factor in diminishing and stopping hemorrhage both from the placental site and from lacerations. The gauze tampon has little or no influence in this direction.

The cases of blood dyscrasia where the coagulability of the blood is nearly or entirely lacking are rare but very serious. Here neither the hot douche, the gauze tampon or ergot have any effect. Only a styptic or some substance of remarkable coagulative powers like gelatin can be of use. A tampon as a carrier of a styptic or gelatin furnishes us probably the best means of carrying these substances to the bleeding parts.

When the blood is normal might it not be of advantage to hasten its coagulation? I do not know whether the presence of gauze in the uterus would be of any value in hastening the coagulation within the vessels. Certainly it would have no more effect than the pressure of blood clots in the uterus. The douche which removes all clots from contact with the opened vessels would probably have no effect in this direction. The question is however unimportant for the plugging of the vessel follows its closure and is probably uninfluenced by conditions external to the blood vessels.

The fourth factor contributing to postpartum hemorrhage, namely, the increase in general blood pressure, caused by mental

excitement will of course be unfavorably affected by disturbances caused by tamponing. Not only the necessary moving of the patient but also the anxiety and pain caused by the manipulation may so increase the bleeding as to unfavorably affect the case. For this reason the least disturbance possible is best.

There now remains to consider the effect of the tampon and of the other hemostatic measures in stimulating the uterine muscle to contract. Without firm and continuous contraction of the uterus and closure of its cavity hemorrhage is inevitable after expulsion of the placenta. So long as the placenta remains attached its vessels are not ruptured and no bleeding occurs. When its central part alone is loosened and its margin remains adherent we have the well known retro-placental hemorrhage. When the edge of the placenta is loosened external bleeding occurs which lasts until the placenta is expelled. The presence of the placenta or a portion of it in the uterus generally prevents its efficient contraction and retraction.

The same is true of a foreign body, a blood clot, the hand, a tampon. The foreign body may stimulate the uterine contractions and so be of use but no doubt its presence prevents the thorough closure of the vascular trunks and just as far as this is true interferes with the mechanism of hemostasis.

The mistake is often made of comparing the uterine tampon with the Miculicz surgical tampon of the abdominal or pelvic cavity or with tampons used to control hemorrhage of the nose. In these cases we have cavities with undistensible and inelastic walls and the tampon acts mechanically to compress the bleeding vessels. In case of the uterus with changing contractile walls as previously said we should have to use an enormous quantity of gauze to fill the uncontracted uterus. Hemorrhage from the ordinary surgical cavity is controlled by ligature or mechanical compression of large trunks and by spontaneous closure of smaller vessels through vascular contractility. In the postpartum uterus, we have very large ruptured vessels. Patent vessels of this size emptying into a surgical cavity would cause fatal hemorrhage in few minutes or seconds.

They are closed more or less completely by the contraction and retraction of the uterine walls. This contraction is perfect only when the uterine cavity is obliterated. In so far as any foreign body prevents this it is harmful.

It appears then that the sole function of the uterine tampon is to excite uterine contractions. It thus acts quite differently from the Miculicz tampon which mechanically closes bleeding vessels. It is a drawback to the uterine tampon that its presence in the uterine cavity prevents complete contraction and interferes with the ordinary mechanism of hemostasis. The fuller the uterus is packed the greater is the interference. This drawback is often or generally spontaneously overcome by the expulsion of the tampon from the body of the uterus into the cervix.

The efficiency of the uterine tampon therefore depends upon its power to excite uterine contractions and its value must be determined by comparing it with other measures having the same object. Whatever effect it may have in mechanically closing vessels must depend upon the pressure exerted by contracting walls. That the tampon is a powerful uterine stimulant there is no doubt. Are there other measures equally efficient and less objectionable?

The three agents to be compared with the tampon are, massage, both abdominal and combined external and internal, ergot, and the hot douche.

Ergot given in large doses hypodermically is very valuable and for permanent effect invaluable. External abdominal massage is often sufficient and with the administration of ergot to be preferred to all other measures because it does not involve any danger of possible contamination of the genital tract. Combined abdominal and vaginal massage is perhaps somewhat more efficient but not equal to the hot douche and only to be used when the latter is not in readiness.

The efficiency of the hot douche in stimulating uterine contractions is but little if any behind the tampon to which it is to be preferred on account of its manifest advantages. Its administration is much simpler and less painful while it does not involve the

risk of contamination that pertains to the latter. It is not my purpose here to describe the technic of the hot douche which was given in detail in my paper last year. I will only insist upon the absolute necessity of complete preparation beforehand involving the securing of an unlimited quantity of hot and cold sterile water, pitchers for mixing, sterile thermometer for determining temperature which must be 120°, irrigator in place and rubber sheet to carry water into a receptacle. The douche is often condemned because it is not given properly. It must be given continuously and for a long time if necessary. The water must be hot enough. Nothing is more dangerous than changing from one measure to another. So much confidence have I in the efficiency of the douche combined with external massage and ergot that I am willing to trust to those measures in all cases of atonic hemorrhage from the site of the normally situated placenta.

The case is different however when the hemorrhage is from a placental site located in the lower uterine segment that is in placenta previa. The contraction of this zone is, as is well known, often incomplete and insufficient to close the large vessels of the placental area. Added to this is the frequent presence of laceration due to the trauma of operative delivery. This is one of the reasons that such a large number of fatal cases of post-partum hemorrhage are in cases of placenta previa. Of course the fact that the patient has lost much blood in the early stages of labor also has a bearing on the high mortality.

In the postmortem examinations of these cases we find the fundus of the uterus contracted into a thick cap of muscle sitting on the uncontracted tube of the lower uterine segment. This fact suggests the treatment Tampon firmly the lower uterine segment, relying upon the contraction of the fundus to furnish sufficient counter resistance. The tampon acts here not only to stimulate contractions but also to mechanically compress the vessels in the cervical tube which here resembles a surgical cavity.

The proper treatment of laceration is by the suture. Hemorrhage from laceration in the vulva and vagina should always be con-

trolled in this way. The repair of bleeding cervical lacerations is somewhat more difficult but would better be done. Not only is this the proper surgical way to control hemorrhage but the closure of the lacerations leaves the uterus in better condition and less liable to rupture in a subsequent labor. However in the absence of preparation or proper assistance perhaps the tampon may be allowed to stop hemorrhage from laceration. It here acts in the same way as in placenta previa. Reliance is had on the contraction of the uterine fundus to furnish counter pressure. One must always be conscious of the danger of increasing the tear in applying the tampon.

As the outcome of our study of post-partum hemorrhage we may then conclude that the tampon may be used.

1st. As a carrier of styptics or agents to cause coagulation of the blood in cases of inherited or acquired hemophilia.

2d. To control post-partum hemorrhage after placenta previa.

3d. To control bleeding from cervical lacerations when surgical repair of the lacerations is impossible.

Discussion.

Rudolph W. Holmes: Mr. Chairman—I am a great exponent of the uterine tampon. I have used it repeatedly, and I am positive that the uterine tampon is more effective than the douche in certain cases as Dr. Bacon is that the douche will answer in all cases of uterine atony. I do not believe in introducing the tampon at first. There must be preliminary manipulations, massage, the use of ergot, the douche, if the case permits it; but where there is an alarming hemorrhage, the assistant, the woman who is present, can do the massage, and at the same time, support the fundus, and introduce the tampon at once. You are sure there is not going to be any further trouble. I believe in introducing the tampon early. I practice it. If I suspect there is any possibility of hemorrhage occurring later, I put in a prophylactic tampon. If I have a case where there is manual removal of the placenta, where a midwife may have been in attendance, if the woman has been in labor long, and the attendant or I have been in attendance, it is much safer to put in a tampon, because I know it is prophylactic. In women who have a breech extraction there is a tendency to atony. The tampon prevents it. The douche, nor more than the tampon, can coagulate blood in the uterine sinuses, although both will produce their effects by contracting the uterus. The tampon is as much a stimulant to contractions post-partum as the rubber bag, or the catheter to induce labor in pregnancy is just as effective. In inertia it is the best stimulant possible. In

cervix tears that extend high up, it is difficult, unless you have hospital facilities, to repair them, and if you do not get your suture in at the upper angle of the tear, you will get hematoma in the broad ligament, and the tampon is the best thing for such a case as that.

The douche is absolutely contraindicated in my mind in a case of tear of the cervix, or in a case of placenta previa, because there is not sufficient contractility in the lower uterine segment to produce contractility with the highest stimulation.

As to the expulsion of the tampon into the cervix, I have tamponned thirty times now, and I have never yet found one tampon that was expelled from the upper segment into the lower. You have a positive criterion as to the effect if such occurs. The first part of the tampon, as you remove it, comes out with ease, that portion in the vagina, the cervix, and lower uterine segment. The moment you come to that part of the gauze that has to go through the traction ring, there is difficulty, and you meet with considerable difficulty before you can pull out the tampon. I have never yet found but one case where it was difficult to withdraw that part of the tampon from that part of the segment of the uterus. All the effects of the tampon are less unless the whole utero-vaginal tract be tamponned. It is exceedingly dangerous to tampon the lower uterine segment without tamponning the upper, because there is a normal secretion from the placental site where blood will accumulate, and you have no stimulation, and the uterus will relax behind the blood. In the last year and a half I have tamponned eighteen times with an instrument, which is the safest and cleanest for tamponning the uterus. It is possible with that instrument to insert gauze into the uterus and vagina without coming in contact with living tissue. It is unnecessary for the hand to touch the gauze. It is a tube twenty-eight centimeter's long, eighteen millimeter's wide, with its caliber slightly curved to conform as much as possible to the pelvic curve. It is introduced into the uterus with obturator, the obturator is withdrawn, the gauze is picked up with forceps, passed into the proximal end, and with the introducer, a steel rod with three prongs pointed, you rapidly push it back and forth, so that the gauze is carried into the uterus. When the gauze is in the uterus, the tube itself will come out. It is the only method of introducing the tampon without any possible source of contamination. With the methods of Dührssen and Schauta and their modifications, it is absolutely necessary for the gauze to slide over the vulva and over the vagina. Latterly, I have been considering the use of non-absorbent gauze, and the more I think of it, the more preposterous it seems to me, that a man, who tampons a womb for the purpose of drainage, uses practically the same gauze that he does for the purpose of arresting hemorrhage. The man who has a pus cavity to deal with must use absorbent gauze. Gauze has a merited place in obstetrics as well as in surgery. I have considered and tried various things. Gelatin is one of the best, because it is hemostatic. But calcium chloride, as stated, acts on the principle of gelatin for hemostasis, and gelatin is a cul-

ture medium. Calcium chloride, 1-500 or 1-1,000, will be just as efficient as a hemostatic as gelatin, and you have in addition the fact that it is not a culture medium.

Joseph B. De Lee, Chicago: This subject of the tampon is one that Dr. Bacon and myself have discussed together in private and many times before various State and local societies. In fact, I may say that we are divided into tamponners and anti-tamponners. I think the whole subject rests on the decision as to what is a post-partum hemorrhage. Some accoucheurs are not afraid of hemorrhage; others are frightened at the sight of even a small amount of blood. I am willing to confess that I belong to the latter class. Experience, by no means a velvety experience, has made me very tender at the sight of blood. Things occurred that indicated to me that hemorrhages post-partum even slight ones were serious affairs. In those cases I have treated with dilatory methods and have finally succeeded in controlling the oozing, the patients were a long time in getting up. They would occasionally have a slight rise in temperature when there was absolutely no indication to its cause. These women had a small amount of milk, and the babies did not thrive well. They were subject to fainting spells, and had to be sent into the country for five or six months.

Another indication that a small amount of hemorrhage is one of dignity, was the occurrence of nervous conditions in women of the higher classes—neurasthenic conditions, and in one case of quite severe hemorrhage, with a nervous weakness or neurasthenia, which has persisted up to the present time.

Another reason which made me fear small hemorrhages was the fact that if I did not stop the hemorrhage right soon, what I considered at the start a mild hemorrhage, it was not long before I had a case of severe hemorrhage, one which would require my best efforts and would throw me into a state of anxiety about the future of the patient. It is true, that these women recovered from their hemorrhages and resumed their duties. That this is not true of all cases, I do not need to bring to your notice, and that women die of post-partum hemorrhage is a fact. Where one allows a slight hemorrhage to gain headway, there is greater difficulty to stop it, and greater anxiety on the part of the physician, and therefore less chance of the woman making a healthy and rapid recovery. For these reasons and for others, which I have not time to mention, I have come to the conclusion that all cases of post-partum hemorrhage should be stopped at the start. They should not be allowed to progress to a dangerous stage, and that we should not wait with our dilatory, uncertain, time-consuming, and blood-letting methods, but should at once resort to a method which will control the hemorrhage, which is radical, permanent and safe.

When I first began the practice of obstetrics exclusively, I was of the opinion of the essayist that the tampon should be reserved for the smallest number of cases and should be left as a last resort. But the continued use of the tampon demonstrated to me the ease of its application, the certainty of its action, and the quieting

effect which it had upon the accoucheur after it was applied. Mental quietude in an accoucheur, perhaps, is not an indication for any operative procedure. It has, however, weight with myself, if no one else has acknowledged it.

As to the points in the paper, the doctor said that the constriction of the blood vessels of the uterus is a very important part in the hemostasis. That is true. But it is not the constriction of the blood vessels themselves; it is the constriction of the blood vessels by the uterine wall. We must get contraction of the uterus to stop the hemorrhage from the vessels. Placental site vessels have no contracting tissues in their walls, but are open sinuses or spaces between the muscles, lined by a single layer of endothelial cells, and have no contractile power. The use of a hot douche in stimulating these vessels to contract is absolutely inert. That the uterine douche might stimulate the large arteries along the uterus which have muscular coats to contract may be admitted, but the effect certainly will likewise be admitted to be rather minimal. I might say incidentally, the tampon under this heading, by raising the uterus from the pelvis, produces a free and easy circulation in the venous system, and allows therefore the blood to escape from the pelvis, relieving congestion, and thus preventing a hemorrhage from congestion.

A second point in the use of the tampon. It was denied that the use of a tampon could exert any pressure against the open vessels, and thus stop hemorrhage, and the assumption that the uterine tampon resembles a Mikulicz drain or tampon is unfounded. I have never seen a Mikulicz tampon applied with sufficient force to compress the blood vessels against the side wall of the pelvis. It is, in most cases, the mere apposition of an irregular surface, the gauze being pressed against the bleeding surface, that favors and invites, by mild compression and capillarity, the accumulation of exuded blood between it and the tampon, and the first meshes of the tampon. I have seen a Mikulicz tampon applied against a bleeding surface on the sigmoid, and in the thick fibrinous deposits that occur in a certain low grade of pelvic inflammations. Likewise, I have seen it applied against the surface left by tumors that have been peeled off of the surface of the intestines in the pelvis, and in these cases the Mikulicz has stopped the oozing from the surface. The explanation is not right, that the Mikulicz tampon stops hemorrhage by the application of pressure against the blood vessels and counter-pressure by bony surface. Therefore, the action of the uterine tampon may be likened to the action of the Mikulicz when the tampon is applied in the uterine cavity. Furthermore, the action of the gauze is a powerful stimulant. It does not act like the clot in the uterus. All of you have seen cases of women who have had a clot in the uterus that has kept on oozing for hours, and during which time the obstetrician has kept on worrying for hours. If he would clear out that clot, the oozing would stop for a few minutes, when it would begin again, and the uterus would assume a rather elastic, boggy condition, which meant that another clot had formed, and the oozing would

cease temporarily. The woman in the meantime is running the danger of acute hemorrhage, and it would not be surprising, after the obstetrician had gotten home, and into bed, if he was recalled by the expulsion of the clot and, succeeding it, a hemorrhage. The tampon applied to the uterus is a firm irregular structure, which stimulates the uterus better than a soft mushy clot. It is a matter of clinical experience that the tampon does exactly what I have said it does. It does stimulate the uterus to contract. The uterus under the use of the tampon becomes a hard, firm tumor in the pelvis. The woman suffers from after-pains, and, as Dr. Holmes has said, the gauze is gripped by the uterus so firmly that it requires considerable traction to withdraw it. The use of the douche in post-partum hemorrhage is opposed to the tampon. The tampon is a certain, quick, rapid, method of stopping hemorrhage. The douche is a more or less certain, slow method of stopping hemorrhage. The douche washes out the clots in the blood vessels, operating against the condition we wish to produce.

The prolonged douche has begun to be recognized as a weakener of uterine contractions. Those of you who wish may try the experiment of a solution of salt water upon any mucous surface. The first effect is a blanching of the surface, and contraction of the vessels. If you continue the use of this salt water on the surface, within a few minutes you will notice dilatation of the vessels and acute congestion. This is not original with me; it is to be found in some German textbook. The douche, if given at all, should be of short duration, and discontinued after from sixty to ninety seconds. The first effect of the douche is to stimulate and contract; its prolongation is one of production of relaxation.

As to the safety of uterine douche as compared with the tampon, it is a relative matter. If a man is skillful in his surgery, he ought to be able to apply the tampon to the uterus post-partum aseptically and successfully.

The next point I wish to touch upon is the use of the tampon in placenta previa, and a constant preference for the douche before the tampon in cases of hemorrhage. Do we know, does every practitioner know that the placenta in a given case has been inserted high in the uterus, and that therefore the hemorrhage comes from the placental site only. If the placenta is inserted rather low in the uterus, near the internal os, or perhaps a little below it, it is not sufficient to make a diagnosis of placenta previa, but it is sufficient to put the placental site out of the district of active and successful contraction of the uterus. Therefore, in using the douche, it is a rather blind measure which may strike the seat of the hemorrhage. On the contrary, in these cases the use of the tampon, as alluded to by the essayist, will stop the hemorrhage, whether it comes from above or below the insertion of the placenta. There are cases of hemorrhage from the lower uterine segment without any visible injury of that segment. I have seen such cases, and Maygrier, a Frenchman, has written of several such cases, in which he has found that no laceration or other injury could either be palpated or seen

by the speculum. These cases present lacerations that are too small to be seen, but which produce hemorrhage in the vascularized lower uterine segment.

The next point is with reference to the use of non-absorbent gauze. That is a very reasonable suggestion, and one which I intend to carry out when the Doctor succeeds in getting a marketable preparation. I have in the past been very successful in stopping post-partum hemorrhages by the use of gauze prepared as follows: Sterile gauze is used. The gauze is made into a strip so as to be half a yard wide, and thirteen yards long with the edges folded in; it is then boiled in a half per cent lysol solution, which is a non-poisonous antiseptic, drawn through a clotheswringer, packed in sterile jars, thirteen yards being packed into each jar, and it is carried in the satchel without any trouble. These jars are sterilized in the Arnold sterilizer or in a wash-boiler, and are sterilized every day for an hour or two for three days. This gauze is absolutely safe, and it has proven in my hands to be successful in stopping post-partum hemorrhages.

When a woman after labor begins to bleed, the first attempt should be to remove the placenta and to get the uterus to contract so as to stop the hemorrhage. If, within a few minutes, by brisk massage of the uterus, the organ does not contract, and the hemorrhage keeps up, the placenta should be removed. If, after the placenta has been removed, the hemorrhage keeps up, brisk massage and the administration by the mouth or hypodermically of ergot should be practiced; then the use of the hot douche if it is ready. If it is not ready, the patient is put across the bed or table; the uterus is cleaned out; the hand put in, and the uterus rubbed thoroughly over the fist. This should stop hemorrhage at once. If there is a laceration, it is determined, and proper treatment instituted. If that does not stop the hemorrhage at once, before the pulse goes up, the uterus is packed tightly from above downward, and the vagina likewise packed. Then the woman is considered safe. There is one exception to that, as there is a condition in some patients in which this treatment is unsuccessful in stopping the hemorrhage. I refer to hemophilia. I am convinced that there is a temporary hemophilia. As evidence of that, I have reported cases where syphilis was the probable cause, and cases where malaria was the probable cause, and continued hemorrhage undoubtedly produces a condition of temporary hemophilia. That jaundice can produce a temporary hemophilia or hemorrhagic diathesis, we all know. In these cases of hemophilia the tampon will not always stop the hemorrhage; but in one case in which I was unsuccessful in stopping hemorrhage with the tampon, a case of hemophilia, the woman bled not so much through the tampon, as she bled into her own tissues. Large hematomata were formed around the vulva in the subcutaneous tissues. A hypodermic injection of strychnine produced a large hematoma. There are some cases in which the appearance of the blood suggests to the accoucheur that he has to deal with a dyscrasia of the blood, something that is abnormal

in the blood. For example, watery blood in which there are black clots floating, where the blood resembles red brick dust in color. In other cases I have seen the blood was of lake color, that is, transparent, as if there was a solution of the blood, and not an emulsion of blood corpuscles, where there was no hemophilia, or where perhaps there may have been a temporary hemophilia. I have soaked the tampon in sterile gelatine solution, but whether the gelatine acts simply because of the calcium chloride it contains I leave untouched, because I do not know. I could cite cases proving that gelatine does stop hemorrhage.

Finally, the best argument for any procedure is the effect of its application. I do not know how many cases I have tamponed. I am looking through the records of nearly seven thousand cases, and it is difficult to pick out those cases I have tamponed. I may have tamponed between seventy-five and a hundred cases, and there have been only three or four cases that have had fever. The hemorrhage was stopped in every case, except in three or four, by the first tampon. In those cases in which the first tampon was not successful in arresting hemorrhage, the second tampon was impregnated with gelatine or without it. In these the hemorrhage was arrested and the patient made a happy recovery. I will grant, I tampon in a good many cases where other obstetricians would not do so.

Edward H. Ochsner, Chicago: I should like to ask the essayist whether the systematic use of calcium chloride has been adopted in the practice of obstetrics. I know in the practice of surgery we have learned from Mayo Robson that calcium chloride is an extremely valuable adjunct in the prevention of hemorrhage.

Dr. De Lee has spoken of cases of syphilis and of malaria, in which there were small repeated hemorrhages, and said these cases could have been operated on with a degree of comfort and safety. I have repeatedly approached a case of anemia, where an operation had to be performed, with a great deal of fear and trepidation. Since the introduction of the logical use of calcium chloride by Mayo Robson, of Leeds, England, these cases can be treated with a great deal of comfort, and in spite of this extended discussion I have not heard today the systematic use of calcium chloride in the cases of temporary hemophilia that have been mentioned. The use of thirty grains of calcium chloride for three consecutive days, three times a day, making 270 grains, will prevent a recurrent hemorrhage from such cases. The most common form of temporary hemophilia the surgeon encounters is caused by cholemia, and in these cases hemorrhage can be permanently stopped by this simple method, and I should like to ask the essayist again whether this remedy has been used systematically in obstetrics.

Dr. Bacon (closing the discussion): As Dr. De Lee rightfully says, the most important question is, what is hemorrhage, and when is it alarming? It is rather difficult to get at statistics as to the frequency of fatal hemorrhages, the ratio given being from one in a thousand to one in ten thousand cases. Perhaps

it is a liberal estimate to say that there is a fatal case of hemorrhage in every two thousand cases of labor. It is probably true that there are hemorrhages which are alarming, at least in ten times that number of cases; that is, in perhaps every two hundred cases. Then there may be excessive discharge of blood (which can be called a hemorrhage), in perhaps ten times as many cases, but if there is a hemorrhage that would be called anxious in one case in two hundred, we have something to go by. My contention has been that there are few of these cases, particularly those cases that follow placenta previa, where the tampon is of value, and in the majority of these the tampon is not necessary.

When Dr. Holmes says that he has tamponed in the last year and a half 18 times or more, if he has tamponed simply the serious cases, and of which only one in ten would have resulted fatally any way, he has treated approximately 3,600 cases. I do not know anything about the number of cases he has treated, but I think the computation goes to show that he is using the tampon in a great many cases where it is unnecessary. That is what I contended at the start.

Dr. De Lee has given figures, but is unable to give us an estimate of the percentage of cases which he has tamponed. He has treated over seven thousand cases, and tamponed about 75 or 100. His tamponing has been practiced in later years, because he previously used the douche. He is tamponing now in more than one case in seventy. This shows that he also is tamponing too much.

The dangers of the tampon have not been alluded to by those who have taken part in the discussion, and I shall not take the time of the Society to go into them to any extent, but I must repeat that the tampon is not without danger, that it is a source of danger when applied in the urgency of an excessive hemorrhage. It is a source of danger in anybody's hands, but surely more so in the hands of those who are not prepared with the best facilities and assistance. The danger, however, is not so much in the tampon itself. The tampon should be made sterile. The danger of contamination of the tampon is in its application. We cannot sterilize the vulva. We know if the vulva is not sterilized, if we introduce the tampon we carry it along through the opening of the genital tract, and introduce germs to the inside. We recognize that particularly when we make an examination and we try to avoid it as much as possible. In our attempts at sterilization we separate the labia and make every effort not to carry any germs from the vulva into the vagina, but it is impossible to take such precautions with the tampon. The tampon is introduced into the uterus and left there for hours. The finger in the examination is introduced into the vagina for only a moment or two, and there is a discharge at the time which washes away any germs that may be taken in, so there is a decided danger in the introduction of the tampon from those sources, and no doubt most of the unfavorable after-effects in cases of hemorrhage are due to the infection that goes on, and has been introduced at the time the

tamponning is done. Moreover, the introduction of the tampon almost always leads to a certain amount of danger, tearing of the cervix by the forceps when the cervix is grasped. I have had it happen to myself that the forceps are simply pulled out, and we grasp again, pull again, and as a result get a number of slits in the cervix, making new wounds, which is not a matter of absolute indifference, so that the dangers of the tampon must be emphasized.

I shall not have time to take up in detail the objections that were made, but I would like to say, in regard to Dr. Kolischer's remarks, that I think the impression must be left that his remarks furnish one of the best supports of my position, namely, that the tampon is not very efficient, but is rather dangerous. He called attention to the importance of antelexion of the uterus, because the tampon is not efficient. The importance of antelexion of the uterus is great, but that is in the early stage of labor, and before the tampon is introduced. The muscles are compressed in that way.

Coming to the remarks made by Dr. Ochsner, I must answer his question. Of course, I did not go into the subject of prophylaxis of post-partum hemorrhage, nor the treatment of later hemorrhage, but in those cases where there has been hemorrhage formerly, where there was a suspicion or exhibition of hemorrhage, it was advocated, and I advocated last year in my paper, that calcium chloride should be given beforehand, and particularly in later hemorrhages it is undoubtedly of value.

UTILITY OF INTESTINAL ANTISEPTICS IN TYPHOID FEVER.*

BY N. S. DAVIS, JR., A. M., M. D., CHICAGO.
Professor Principles and Practice of Medicine of
Northwestern University.

Students of medicine were convinced before the 19th century had run two-thirds of its course, that typhoid fever was generally transmitted by contaminated drinking water. In 1880, Eberth isolated the bacillus typhosus, a micro-organism which was soon shown to be abundant in the intestines, in their wall, especially in the adenoid structures, also in the mesenteric glands and spleen, and to occur rarely in other tissues. It was not until very recently, however, that it was found in the blood in any considerable number of cases.

The symptoms and anatomical changes which develop in the course of typhoid fever are due chiefly to chemical toxins, which are generated by this bacillus. It seems probable that the micro-organism when collected in one place may provoke congestion, necrosis and inflammation, but often secondary in-

fection plays a part in producing the grosser changes of the disease. Therefore, to understand the treatment of typhoid we must appreciate that we have chiefly to do with an intoxication, to some extent to deal with a general infection, and at times with a secondary infection by other organisms. Therefore a physician, when treating a case of typhoid must aim to either neutralize the toxin or effect its rapid elimination, or stop its generation. If these objects of treatment cannot be perfectly accomplished, the effect of the poison upon the nerve centers and other tissues must be combatted. We can not meet the first indications at all perfectly, therefore the most important elements of treatment are protective rather than directed to cut short the malady.

Can we prevent the formation of the toxin? This means can we destroy and eliminate the typhoid bacillus. The question must be answered in the negative. Antiseptics have been administered in many forms, hoping thereby to destroy the germs in the intestines. But a sufficiently large quantity of them cannot be taken with safety. Moreover, we now know that the microbe is rapidly disseminated through the body, or is deeply imbedded in the wall of the intestine, where it cannot be reached unless drugs are used in poisonous doses. Bacilli are probably never numerous in the blood, but they are most abundant there early in the course of the disease. For instance, they have been found in from 80 to 90 per cent of cases examined in the first week, and in 70% in the second, in 50% in the third, and in 25% later. When relapses occur they are again found in a large per cent of cases during the first few days. From these facts it is evident that intestinal antiseptics given as early as the disease can be recognized, are not likely to reach all of the micro-organisms which are about to create and maintain the malady.

The toxins of typhoid are not soluble like those of diphtheria, and tetanus but are a part of the substance of the bacilli. It has been suggested by Pfeiffer that organisms of this class set free their toxins only after their death and disintegration. If this is true, the inutility of antiseptics which de-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

stroy them is more readily understood. Of typhoid fever it is true that the symptoms become more grave while the organisms become less numerous in the blood as during the first days of the disease they are most abundant.

It is probable that the apyretic cases of typhoid are those in which the wall of the intestine is invaded, but for some reason the blood is not; and on the other hand, the cases, rarely described, without intestinal lesions, are those in which the blood has been invaded and in which the intestine has escaped.

However, intestinal antiseptics have a place in the present treatment of typhoid fever. They are useful, for they may limit the number of intestinal organisms of all kinds and the amount of putrefaction, and therefore of toxins generated by them, and may also lessen the danger of secondary infection through the wounds in the bowel which the disease produces as well as danger of reinfection of the blood.

Calomel was one of the first intestinal antiseptics tried. It is useful both because it is an important antiseptic and because it promotes elimination from the intestines. It is given almost exclusively during the first four or five days in which patients come under treatment. Later it is rarely employed, because it is liable to aggravate the intestinal catarrh which is a part of the disorder. I believe in this, as in most other acute illnesses, it is important to cleanse the bowels early, something which calomel accomplishes well and for which it can be commended. Occasionally it can be safely used later in the course of the disease for the relief of constipation, but as a rule enemata of water are efficient and much less likely to do harm.

Carbolic acid alone or combined with iodine was formerly much used. However, these drugs probably do not reach the intestines, but are absorbed from the stomach. They may help by inhibiting putrefaction or other fermentation in the contents of the stomach.

Drugs were sought which would be insoluble, or at least insoluble in the stomach, but would be efficient antiseptics, and iodoform, B. naphthol, betol, benzo-naphthol,

salol, and others have been used, because in varying degrees they meet these requirements. None of them, however, materially lessen the duration of the disease, or render the contents of the intestine sterile. But several do make the stools less offensive. I find many practitioners still using salol. This I ceased to use in typhoid fever because experience taught me that it did not modify the course of the disease, and reason taught me that it must produce some of the ill-effects of chemical antipyretics.

Last summer and fall I experimented with a new intestinal antiseptic, acetozone, which was devised by Novy and Freer. They found it capable of making the contents of the intestines of animals sterile without harming them, but doses sufficient to do this have never been given to men. The drug was tried in typhoid fever by a few physicians a year earlier and was tested by many last summer. My first impression was that acetozone, when its use was begun during the first ten days of the illness, shortened the duration of the disease. But late in the fall, the severe, complicated cases came under observation, and they materially lengthened the average duration of the cases which were treated. However, the following statistics corroborate my early impression.

From July 1 to December 31, 1902, 59 cases treated at Mercy Hospital were given, in addition to the usual bath treatment, acetozone in solution in water, in the usual doses. Among the 59 there were two who died during the first three days of hospital residence, and before treatment could accomplish much. If we exclude them the per cent of fatalities is 10, or including them, 13. Twenty-one patients during the same months were treated in the same manner, but were given no acetozone. Of this number 2 who died might be excluded because of death almost immediately after entering the hospital, when the per cent of mortality would be 19, or if they are included, 21. These are unusually high mortality percentages, as the average for many years in this hospital has been less than 10 per cent.

Analyzing the statistics of those who recovered and who were given acetozone, I find that those admitted to the hospital during

the first week of their illness, averaged 21.25 days of fever, ranging from 9 to 33 days; those admitted in the second week averaged 31.5 days of fever, ranging from 11 to 83; those in the third week 34.7 days of fever, ranging from 20 to 58, and those admitted after the third week averaged 44.5 days of fever, ranging from 32 to 71. An analysis of the 21 who did not get acetozone is not as satisfactory because of the small number treated, but the results are: that those admitted in the first week averaged 28.6 days of fever, with a range of from 19 to 42; those admitted in the second week averaged 26 days, and ranged from 13 to 39; those in the third week averaged 41.5 days and ranged from 33 to 59; and those admitted after the third week averaged 54.4 days of fever and ranged from 28 to 81 days.

These statistics emphasize the value of systematic treatment begun early, but seem to show that the use of acetozone shortened the course of the disease. However, the number of patients treated is not enough to justify a conclusion. But the figures are such as to encourage one in the use of acetozone or of intestinal antiseptics as adjuvants to the bath treatment of this disease.

Acetozone does not produce visible effects. The stools look and smell as they usually do. It is given dissolved and largely diluted with water. Twenty grains are put in two quarts of water and a glass of the solution is administered every two to three hours. The drug gives the water a slightly pungent taste and odor. Often equal parts of medicated water and milk are given even more frequently. Taking so much fluid promotes elimination by the kidneys, which is a most beneficial effect. The drug may be also a diuretic.

At first turpentine was used in typhoid fever, because it was found to lessen tympanitis. Now it is regarded as useful as an intestinal antiseptic, as an astringent, and because it prevents and checks hemorrhage as well as relieves tympanitis. There is no other drug so well adapted to the needs of the intestinal tract in this disease. I have long used it in all cases as soon as the abdomen begins to be noticeably distended and tense. The only contra-indication for its employ-

ment is albumenuria. When the kidneys are seriously involved, turpentine will increase the trouble in them, and therefore it should not be used. I believe that the early and persistent use of turpentine lessens the liability to excessive tympanitis, diarrhea and hemorrhage.

Bouchard, regarding typhoid fever as an intoxication, produced by the absorption of soluble poisons generated in the intestine, advocated the administration of large doses of charcoal, which rendered the stools less offensive, diminished the tympanitis, absorbed many of the products of fermentation, and therefore caused their elimination from the intestines and prevented their absorption into the blood. But because, even when combined with intestinal antiseptics, it did not materially shorten the duration of the malady, it has not been generally used, although Bouchard's statistics were favorable, for the mortality was apparently lessened. Charcoal is however useful in those cases in which there is most toxemia, or in which the "typhoid state" is most pronounced.

Because of the desirability of ridding the alimentary tract of microbes and of poisons, there have been clinicians all through the last century who advised keeping the bowels open with, if necessary, daily doses of salines and occasional doses of calomel. The majority, however, believe that this treatment aggravates the catarrhal inflammation of the bowels which usually accompanies the disease, and they prefer to rely upon enemata rather than salines. I am convinced that in many cases, especially when the "typhoid state" is well developed, colonic flushing does good. After each high enema as much of a sterilized salt solution as the bowel will retain, should be left in it to assist the elimination of toxins by producing diuresis.

In the most severe cases, hypodermic injections of sterilized salt solution also do good because they stimulate excretion by the kidneys.

An antitoxin has not yet been found for typhoid fever. But the results of experiments lead one to be hopeful. In 1893, Frankel experimented with inoculations of cultures of typhoid bacilli sterilized by heat, and showed that the blood of those who were

vaccinated possessed bacterioidal and immunizing properties. Vaccination with such sterilized cultures has been tried extensively during the last few years, and with encouraging results. For instance, in South Africa the English found that of 1210 persons ill during an epidemic, the mortality among the un-vaccinated was 14.25%, and among those vaccinated from 6 to 18 months previously, 6.8%, and the disease was decidedly milder when those who had been vaccinated were attacked. Vaccination for typhoid is not applicable to the treatment of those who are ill, but is a prophylactic measure. However, I refer to it now to call attention to what is being attempted along lines which may lead to the discovery of an antitoxine.

Discussion.

John A. Robison, Chicago: Dr. Davis has very succinctly and admirably outlined the most modern and the best treatment of typhoid fever. While listening to his report of acetozone I was pleased to learn that he was not an enthusiast in the use of this drug. I have experimented with it somewhat, but am not prepared at the present time to give a definite report. Last summer and fall we used it quite extensively in the Presbyterian Hospital, and the results we obtained did not seem to justify continuing its use, consequently it was abandoned. I recall, however, that it did seem to shorten a few of the cases, but, as the author stated in his paper, the experiments made in this line have not been followed out extensively enough to permit me to venture an opinion on the subject.

In regard to intestinal antiseptics, there is one that he failed to mention and which belongs to the coal-tar products, and that is guaiacol. In the treatment of typhoid fever I have used the carbonate of guaiacol quite extensively; in fact, there is no one drug which I have used any more as a routine procedure than guaiacol carbonate. Partly on account of its supposed intestinal antiseptic action and partly, but not to a very great extent, because of its antipyretic action. From its use I think we frequently obtained a lessened amount of intestinal fermentation. I give it in very small doses; one or two grains every two or three hours.

The theory of intestinal antisepsis is a beautiful one, but it is very difficult to put it into operation practically.

I agree with the doctor in regard to the use of turpentine. I think it is one of the best remedies at our command; one we can use more frequently than any other in the treatment of this condition. I believe that as a routine measure the use of intestinal antiseptics is the plan of treatment we should adopt, and, in addition, give some simple antipyretic. The

less medicine we give in typhoid fever, the better, are the results which we obtain.

Dr. Davis (closing the discussion): Just a word in closing. I regret that I did not, perhaps, in my paper define my position quite as clearly as I intended to in the matter of intestinal antiseptics. I am quite convinced, from the nature of the infection and the pathology of the disease, that we cannot expect to find a specific treatment in intestinal antiseptics. They are merely useful adjuvants in preventing constant reinfection of the patient and a consequent prolongation of the trouble in the form of relapses. Furthermore, intestinal antiseptics have a place in preventing the toxic condition which develops as the result of putrefaction in the intestinal canal and to which secondary infections are sometimes due.

One word more, and that is in regard to the importance or utility of drugs. My study of acetozone brings it home to me particularly. When I first began to use acetozone last summer it seemed to me that the disease was shortened in duration. As we got further along in the course of the disease during the fall, when we met the severe cases of typhoid, the prolonged cases, it seemed to me that acetozone did no good whatever; that it was practically useless. That was my feeling until I came to analyze the cases that were treated with this drug. We found upon analysis that there was actually a little lessening of the duration of the malady in those cases treated by acetozone as compared with those that were not. Further statistics ought to be gathered, however, because my observations are not sufficient on account of the comparatively small number of cases, practically only 80 in all, and also because the cases I treated with acetozone occurred mostly in the last part of the epidemic, when the more complicated cases were most prevalent, when the cases were more prolonged, and the therapy naturally would not be quite so satisfactory as in those cases treated early. So that we need further statistics, and careful analysis before pronouncing a final judgment on the worth of acetozone. The very fact that my impressions of acetozone were to the effect that it was of little value and that these impressions were not wholly corroborated by more careful study of the statistics, shows again that we must make a more careful statistical study, rather than depend upon impressions which we may receive from the treatment of a few cases occurring at a certain time.

SOME FACTORS IN THE SPREAD OF TYPHOID FEVER.*

BY FRANK H. RUSSELL, A. M., M. D., KEWANEE.

Outbreaks of Typhoid fever whether on a large or small scale are frequently exceedingly mysterious in their origin. Sporadic cases happen in a community where least ex-

*Read at the Galva District Medical Society, May 7, 1903.

pected and among people whose mode of life is above criticism. The question always comes, "where did it come from, and how did they get it?" I propose to take up some of the factors in the spread of that dreaded disease—factors which have been exceedingly interesting both from the standpoint of literature and investigation. I have intentionally left out the consideration of the contamination of water and milk supplies.

1. Man. One of the principal agencies is man himself. Wherever men assemble in any considerable number Typhoid fever is almost sure to find its way. In regions far remote from the permanent habitations of man, in lands where the white man has for the first time made his appearance, in lonely mining regions never before inhabited by a human being—into these places this disease has come. But it has been transported there by man himself. In the Government Report of Typhoid fever in the Spanish American war the statement is made, "We have traced typhoid fever into every encampment in which it became epidemic and man himself is the most active agent in the dissemination of the disease. It is he who carries the specific virus about his person into all congregations of men. He deposits the virus in his excrement and it is thence distributed in various ways among his fellow men."

Let us relate some common experiences. The nurse after caring for her patient day and night grows careless,—eats a morsel of food with unwashed hands, or she leaves contamination upon the door knob, or upon a chair, or upon some cooking utensil, and someone else assists in transferring it. The clothes smeared with dejecta are sent to the washerwoman. The next day they are returned in the same basket together with handkerchiefs, napkins, with which we wipe our mouths and on which we blow our noses. Or soiled clothing is piled up in some dark closet or corner. Particles become mixed with the rest of the dust. This is stirred up by the maid in the morning and it alights on the lettuce just picked over for dinner. When the patient is convalescing the nurse goes to eat dinner with a friend; while waiting for the announcement of the midday

meal she takes out her knife and cleans her finger nails. These scrapings, perhaps laden with typhoid germs, mix with the rest of the dust and are disseminated by the first breath of air. When the patient is convalescent the bed clothing is folded up and put into the closet; a visitor comes to the house and that same clothing is given to him to sleep under. Many other such instances might be mentioned.

It has been shown by experimental research that pure cultures of typhoid fever bacilli will retain their virulence when poured upon cotton, woolen or linen cloth for from two to three months. It is stated that typhoid bacilli are killed by a perfect desiccation, but a wind may carry partially dry infected particles of dust which may be deposited on food or inhaled and thus cause typhoid. It is perfectly possible for a person to carry the microbes under his finger nails or in his clothing from one state to another and then accidentally introduce the germ into the alimentary canal of himself or that of another.

While some are exceedingly careful to disinfect the feces, little or no attention is paid to the urine. While the bacilli are not found in the stools later than the third week after convalescence as a rule, yet in the urine they may persist for weeks and months. Schüder, giving results of investigation by himself and others, says that bacilli are found in 29% of cases examined. He believes that the percentage would be even higher if prolonged search were instituted. In one case in which he examined the urine every day he found the typhoid bacilli only on the 49th day.

Klimenko investigated 65 patients with typhoid fever to determine the persistence of bacilli in the urine, and he says they usually disappear from the 3d to the 30th day of convalescence. In a few of his cases they persisted a year.

Gwyn, in the Johns Hopkins Hospital reports, found typhoid bacilli in the urine of a man five years after having the fever. Neufeld, states that he thinks there is greater danger in the urine than in the feces. He states as his reasons that: (1) There is no odor to urine to remind one to wash his

hands. (2) The bacilli are more numerous in urine than in feces. In one case he estimated that there were 100 millions to a c.c. of urine. (3) Soiled articles such as bedpans, clothing, etc., readily escape notice for the lack of any filth one can see. (4) The bacilli persist longer in urine than they do in feces.

What nurse is there who takes the same precaution with urine as with feces? The feces may be disinfected but the urine is simply thrown out. The convalescent patient urinates wherever he takes a notion. So a patient could unwittingly infect a water supply years after his attack of typhoid fever.

The sputum of typhoid patients seldom receives any attention. Jehler examined the sputum from twenty-three cases and made cultures from fifteen cases that came to an autopsy. He found the Typhoid bacilli in many cases both with and without complicating bronchitis. Four out of five cases complicated by pneumonia contained them. Two out of six cases uncomplicated by bronchitis gave positive results. Pure cultures were found in sputum during the 3d week in five separate examinations. He also makes the statement that typhoid bacilli were found in some cases of bronchitis without intestinal lesions.

Typhoid abscesses are rather rare but they are not without danger to those who come into contact with the pus. Many cases are on record where the organism has been found in the abscesses long after the patient has had the fever. These are chiefly bone abscesses. Sultan opened an abscess six years after recovery and cultivated from it the specific germ. In Buschke's case of bone abscess the germs remained alive 27 years.

Thus we see there are many ways of communicating the disease by direct contact with man himself or his excretions.

2. Soil. The ancients had an idea that the locality had much to do with the spread of disease. People fled from the infected districts. There is reason in this as has been proven by experiments and observation. Among other infections, typhoid bacilli are known to inhabit certain localities for a long period of time.

There is to be found in almost every community some doctor or nurse who insists upon the burial of dejecta in the garden as the proper way of disposal. Many have an idea that soil will kill typhoid bacilli. The reverse is found by observation and experiments to be true. The bacilli will not remain buried in the holes or trenches but will come to the surface like "fungus in a hot bed."

Some experiments will be of value on this point. Robertson selected a grass covered field for his experiments. He removed the turf and planted the typhoid bacilli at different depths. 1st. Just below the turf. 2d. 9 inches below. 3d. 18 inches below. The soil which had been removed was carefully put back. 130 days after the planting, the turf was removed and the soil examined. In all cases the organisms were alive and had multiplied. Not only this, but those that were planted 18 inches in the soil had gone to the surface where they were found to be abundant and virulent. During the winter the organisms remained dormant. In the spring they were fertilized with a little beef broth which brought out an abundant growth of the germ, nearly one year after the planting.

In perfectly desiccated dust the organisms will die. But dust need not be perfectly desiccated to be blown by wind. In dry soil Firth and Horrocks have shown that the bacilli will retain its vitality for 25 days. Uffelman has shown that they will live over 60 days.

Martin planted the organism in contaminated soil where typhoid had been endemic. Active growth was found after the lapse of 105 days. Recently Levy and Kayser have reported some experiments on the length of life of the typhoid bacilli in stools that have not been disinfected. The contents of a private cement vault were scattered on the garden. Five months previous to this some typhoid stool had been emptied into this vault. After this material had remained on the garden soil for fifteen days, they were able to cultivate from the earth on which the feces were spread the true typhoid bacilli.

As a matter of experience Veeder recites a case of a small village where typhoid had

been endemic for a number of years. The water supply was beyond question and the people were usually careful and cleanly. The doctor and the neighborhood nurse were advocates of soil disinfection. At a good distance from the well trenches were dug and the dejecta emptied therein. Year after year they had their succession of fever cases. The doctor finally succumbed to the disease, and also the nurse. After their death the custom of burying the feces ceased and "the disease took its departure, not more than one or two sporadic cases, evidently imported from out of town, having occurred in the ten years or more that have since elapsed."

Instance after instance can be related where armies have become infected with typhoid by using camping grounds formerly occupied by soldiers when typhoid was epidemic. The 23d Massachusetts in April, 1862 developed 300 cases soon after coming to an infected Confederate camp ground.

In January 1890 the British in India had a similar experience. Joseph Curry in writing upon fever in the Philippines says that some of the typhoid fever seen in American troops in the Philippines may have been imported to Manila from San Francisco, but the *great source* was the old Spanish camp ground that our soldiers were obliged to occupy for military reasons.

So there are localities where typhoid is perpetuated year after year because of soil infection. Dejections scattered in the garden are especially dangerous. Whether scattered on the surface or buried in holes or trenches the effect is the same for it all comes to the surface. Onions, lettuce, radishes, turnips,—anything that has earth or that we eat raw can carry the dreaded infection to the gastro intestinal tract. Small whirlwinds can pick up partly desiccated dust in which the organisms reside and deposit it on the kitchen table on which are found the milk and food ready to be eaten.

3. Flies. Outside of the cities where a good sewerage system is maintained one of the greatest factors in the spread of typhoid is the common house fly. To see the easy possibility of such a mode of transmission one need only to look at the feet and legs through a magnifying glass. The legs are

covered with a large number of short bristling hairs. The feet are each armed with two claws, between which are two membranous pads. These pads are covered with tubular hairs that secrete an adhesive fluid, by means of which the fly clings to smooth surfaces. Let a fly walk through dust and the particles can be seen clinging to those short hairs and padded feet. The more sticky the dust the closer will the particles adhere, and it is reasonable to assume that wherever a particle of dust can adhere, any number of bacteria can find lodgment.

This is not all theory for definite experiments have been made along this line.

Sangren (1) put flies in a culture of anthrax for one-half minute and immediately transferred them to sterile plates; (2) exposed flies to a culture for one minute and then after the lapse of half an hour allowed them to walk on a sterile agar Petric dish. The same experiments were used with fecal matter infected with anthrax. An abundant culture was obtained in all instances. Anthrax was used because the colonies could be so easily recognized. The same series of experiments, however, were tried with typhoid bacilli with the same result.

Coplin, writing of results of his experiments, makes the statement that the bacillus typhosus was demonstrated by culture to be present 96 hours after the infection of the flies.

Experiments have not only shown that the bacilli can be readily carried upon the person of the fly but Celli showed also that virulent bacilli could be found in the feces of flies. He fed flies with pure cultures and examined their contents and dejections microscopically and culturally. Inoculation on animals were also made proving that the bacilli which passed through flies were virulent.

Ficker has recently described some interesting experiments to determine the length of life of the typhoid bacilli in or on the bodies of flies which had been fed with infectious material. He found they were able to convey the infection to objects as long as twenty-three days after the feeding.

Ascertaining without a doubt that flies can and do act as carriers of infection, what

are the possibilities. In the report on the origin and spread of typhoid fever in the United States Military camps during the Spanish American war, they state that in many camps "flies were undoubtedly the most active agents in the spread of typhoid fever. Flies alternately visited and fed on the infected fecal matter and the food in the mess tents. More than once it happened when lime had been scattered over the fecal matter in the pits, flies with their feet covered with lime were seen walking over the food. Typhoid fever was much less frequent among members of messes who had their mess tents screened than it was among those who took no such precaution."

Veeder says he had once seen typhoid dejections emptied from a commode and the latter placed near a pitcher of milk which had just been left at the door. Flies gathered about the milk and the commode and were flying from one to the other.

Uffelmann in working on the cholera spirillum infected a fly with the germ and placed in a glass which contained sterilized milk which he allowed it to drink. As soon as this had occurred he shook the milk and then put it into an incubator for 16 hours. At the end of that time one drop of milk yielded 100 colonies of cholera spirillum. The same experiment could undoubtedly be duplicated with typhoid bacilli.

Alice Hamilton made a very exhaustive study of the typhoid epidemic in Chicago in 1902. She makes the statement that "Flies caught in two undrained privies, on the fences of two yards, on the walls of two houses, and in the room of a typhoid patient were used to inoculate 18 tubes and from five of these tubes the typhoid bacillus was isolated."

From these experiments and observations there can be no doubt that flies are active agents in the spread of typhoid fever, especially in the country where privies are in use, and where the dejections are emptied on the ground. Flies are everywhere. They follow the horses from the country to the town, ride in the cars from city to city, travel in steam ships from continent to continent. In 96 hours a fly can be far from the place where it covered its legs with filth and drank

in deadly poison. It is only with the greatest of care that they can be kept out of our kitchens. It takes eternal vigilance to keep them off our potatoes, from getting into the milk pitcher, from depositing their feces on the vegetables, from crawling over our faces and hands. Who knows where they have been? Perhaps swarming like bees in someone's backhouse, perhaps tramping about over a bedpan that has just been emptied, perhaps greedily devouring a typhoid dejection emptied in the garden, perhaps slaking their thirst in the saliva drooling from the corner of the mouth of an unconscious typhoid patient. Then with feet contaminated with the dirtiest of filth and their bodies vile as the vilest they fly into our faces and walk over our food, scratching their legs and rubbing their wings.

When we consider how many ways there are of transmitting the germ, is it any wonder then that there are some mysterious cases of typhoid fever that develop in our communities?

EUPHTHALMIN AS A MYDRIATIC FOR THE GENERAL PRACTITIONER.*

BY ALBERT B. HALE, M. D., CHICAGO.

In an unexplored corner of the Chicago Medical Recorder (February, 1900) I reported my experiences—physiologic and diagnostic—with Euphthalmin and expressed the hope that the drug might come rapidly into favor not only with the ophthalmologist, who is using a pupil-dilating chemical every day, but also with the general practitioner who might not infrequently wish to convince himself that the iris was performing its proper function uncheeked by an acute congestion, or was not retained against the lens or cornea by the product of old and inactive inflammation, or wish to explore the fundus for signs of local and general disease; all this in as quick and safe a way as possible.

There are two great purposes of the intro-ocular effect of the mydriatic group. In some cases we might, if we could, dispense

*Read at 53d Annual Meeting, Chicago, May 30, 1903

with the cyclopegia of say atropin; in other cases, if we are using a drug for the estimation of refraction we could wish to secure paralysis of the ciliary muscle by itself, leaving the pupil undisturbed and the iris to play its active part in visual physiology. This latter drug has not yet been and never may be found, but we do seem to possess the former, i. e., a drug that, without noticeably effecting the more powerful ciliary muscle yet possesses strength enough for the short time desired to overcome the sphincter of the iris and to allow the fundus to be flooded by light without protracted annoyance to the patient.

To be sure we have in cocain a drug that answers this purpose to a certain extent but it has the two disadvantages of producing an anesthesia that is not without danger and of sometimes macerating the corneal epithelium in a way that may lead to unpleasant consequences. In homatropin we have mydriasis but some cyclopegia and the effect does not disappear before at least twenty-four hours have passed.

All this and more I have said in my earlier article and I should feel unauthorized to bring this drug again into print were it not that I have had opportunity since my original experiments to confirm them in a more elaborate manner, and that I hear from the agents for the drug (Shering and Glatz) that Euphthalmin has so little recognition in America as to compel them practically to withdraw it from the market. As for its physiologic properties, I must repeat what I said three years ago and annex the following table:

Age.	Refraction.	Near point 1 hr. before using drug.	Near point 1 hr. after drug.	Duration of dilatation.	Decrease of accom.
9	Hy.	8 cm.	10 cm.	2 hours.	2.50 D.
13	Hy.	10 cm.	12 cm.	2 hours.	1.66 D.
30	Hy. & astig.	12 cm.	13 cm.	3 hours.	0.56 D.
45	Em. presby	22 cm.	25 cm.	2 hours.	0.54 D.
63	My. 1 $\frac{1}{4}$ D.	90 cm.	90 cm.	4 hours.	0.00 D.

1. Euphthalmin (5 to 10% watery solution) produces practically no subjective symptoms.

2. Its mydriasis is of short duration.

3. The effect shows itself earlier in youth than in age.

4. It has no effect on tension.

5. It has no effect on conjunctiva or cornea.

6. It influences Accommodation to only a slight degree.

7. The normal condition of the pupil is rapidly restored.

8. It is apparently non-toxic.

Since then I have used Euphthalmin in all kinds of cases—old and young—for diagnostic purposes. I find that I obtain a satisfactory dilatation in nearly every instance after two drops of five minute intervals at the end of 45 minutes at most, using either a 5% to 10% solution. (I do not add cocain to this, as I wish to avoid all effect on the cornea.) This dilatation lasts usually two hours, never more than four, it causes no inconvenience to the patient beyond the unusual amount of light and I have had no complaint that could lead me to suspect increase of tension (glaukoma), although I know that glaukoma has been aroused by Euphthalmin (Knapp). Clinically I resort to Euphthalmin as a routine measure and in over 200 more cases I have had no occasion to be disappointed with the result. It will not subdue an iritis or break up adhesions, but for that reason it is satisfactory, as the very failure to act demonstrates that there is some condition in the iris demanding more than a simple mydriatic. In contracted pupil from nicotine amblyopia it is excellent; in all cases where the fundus is to be studied either for diagnosis or classroom exercise it has no equal, does not annoy the patient nor cause the complaint that vision at the reading point is noticeably modified.

I wish to report however, one series of experiments with Euphthalmin which placed it beyond doubt in my mind as the most trustworthy and by far the least harmful agent for the production of mydriasis for the study of intra-ocular conditions.

I happened to be in charge of a home for aged negroes where I found ten inmates varying in age from 70 to 100, with poor

vision. Most of them had contracted pupils (the pupil and fundus of the negro, on account of the excessive pigment is in any case hard to examine), some had suffered from earlier inflammation of the eyes, in some a cataract was evident or suspected, but in none could a thorough examination be made. In many of the eyes there was high tension and in one person a distant simple glaukoma.

My Assistant, Dr. Winans, to whom I am indebted for the written notes of the experiment was asked to drop into each eye of these inmates one drop of a 10% solution at fifteen minute intervals for three times. I arrived at the home later than I had appointed and in his desire to maintain the mydriasis he had already secured after 40 minutes, he gave six doses during an hour and a half. Close attention was paid to the extent of dilatation, to the observations of the patient and to the condition of tension. With the pupils in their usual state it was impossible to make a satisfactory ophthalmoscopic examination, but at the end of the interval mentioned above and for two hours thereafter there was a maximal pupil where no adhesions were present, and evident signs of irregular pupil where adhesions either at the pupillary edge or further back had been established. There were then discovered: Iritic adhesions in 7 eyes; immature cataract in 8 eyes; mature cataract in 6 eyes; optic atrophy in 6 eyes; glaukoma in 2 eyes; normal condition in 1 eye.

In only one of these cases was any notice taken of the effect of the drug; the tension remained as it was before. By the next morning no trace of the drug was discernable in any eye. In the one exceptional case there had been before the use of Euphthalmin continuous glaucomatous pain and the patient attributed the pain that was evident on the next day to the drug, although I found no increase of tension; but I am willing enough to admit that the drug may have had its influence.

This is therefore to me a satisfactory proof from the empirical side that Euphthalmin is a trustworthy and effective, and the best pure mydriatic we have for diagnostic purposes.

New Incorporations.

The Secretary of State at Springfield has licensed the following corporations:

Phenix Medical Association, Chicago; capital, \$2,500; commercial and collection agency for medical practitioners; incorporators, Louis B. Door, G. L. Jacobs, M. G. Eldred.

Pineau Medicine Company, Chicago; capital, \$30,000; manufacturing proprietary medicines; incorporators, E. W. O'Brien, V. J. Burke, E. E. Sutherland.

Hobbs Spanish American Medicine Company, Chicago; capital, \$2,500; manufacturing chemical preparations; incorporators, John F. Robertson, William C. Harmon, Haney Keltling.

Ivole Chemical Company, Chicago; capital, \$25,000; manufacturing drugs, novelties and dentifrice; incorporators, Samuel M. Sargent, Guy H. Powell, Joseph J. Shaw.

Bauer & Black, Chicago; capital increased from \$200,000 to \$250,000.

Marriages and Deaths.

Marriages.

Otis J. Baldwin, Farmersville to Miss Edith Austin, Virden, Nov. 26.

Robert F. Campbell to Miss Gertrude C. Wallis, both of Chicago, December 10.

Budd Clarke Corbus, Chicago to Miss Julia Gertrude Pitkin, Benton Harbor, Mich., Dec. 15.

Henry M. Stevenson, Bloomington to Miss Bessie Coykendall, St. Paul, Minn., Dec. 2.

George William Parker, Chicago to Miss Amy Josey, Calumet, Mich., at Chicago, Dec. 1.

A. M. Wiles to Miss Cora M. Whitehead, both of Jerseyville, Dec. 3.

Charles B. Younger, Chicago to Miss Nannie Ruth Broadus, Lacon, Nov. 25.

Deaths.

Beebe, Albert G., Chicago, Dec. 2, aged 60.

Benson, Valentine S., McLeansboro, Nov. 27, aged 69.

Bronson, Henry P., Chicago, Dec. 15, aged 51.

Clark, Richard E., Chicago, Dec. 13.

Conroy, A. F., Chicago, Nov. 23, aged 33.

Frost, L. A., Jacksonville, Dec. 14, aged 61. Dr.

Frost has been disabled since 1898 when he suffered a stroke of paralysis. For twenty-four years he was assistant physician at the Central Hospital for the Insane.

Kendall, H. W., Quincy, Nov. 25, aged 72.

Kingsley, Virgil, Carthage, Dec. 4, aged 51.

Rembe, Edw., Lincoln, Dec. 14, aged 49.

Stewart, H. L., Humboldt, Nov. 24, aged 80.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

JANUARY, 1904.

NEXT ANNUAL SESSION, BLOOMINGTON, MAY 17, 18, 19, 1904.

OFFICERS:

PRESIDENT—CARL E. BLACK, Jacksonville.
SECRETARY—EDMUND W. WEIS, Ottawa. TREASURER—EVERETT J. BROWN, Decatur
EDITOR—GEORGE N. KREIDER, Springfield.
ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

J. W. Pettit.....Chairman
Ottawa.

E. B. Montgomery....Secretary
Quincy.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

E. M. SuttonChairman
Peoria.

R. W. HolmesSecretary
387 N. State St., Chicago.

Committee on Public Policy and
Legislation.

P. M. WoodworthChicago

L. C. TaylorSpringfield

H. C. MitchellCarbondale

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

J. W. Pettit, Ottawa.

E. M. Sutton, Peoria.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

Term Expires 1904.

(2) W. O. Ensign, Rutland.

(6) L. J. Harvey, Griggsville.

(9) J. C. Sullivan, Cairo.

Term Expires 1905.

(8) H. C. Fairbrother, E. St.
Louis.

(5) W. K. Newcomb, Cham-
paign.

(3) J. F. Percy, Galesburg.

Term Expires 1906.

(7) C. Barlow, Robinson.

(1) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

The Pres. and Sec'y. Ex-Officio.

NEW YEAR'S GREETING.

The year 1903 has been noteworthy in the history of the medical profession of Illinois. During the year such a unification of professional interests has been accomplished as had not been deemed possible five years ago. During the year The Journal has grown from a circulation of 1,500 to 4,500, and from 48 pages to 132 pages of contents. Local Societies have been organized until only thirteen Counties, with an aggregate of about 500 physicians, about 40% of the total number, remain outside the gates. The State has been divided into nine districts, and discreet councilors have been appointed to look after professional interests in these districts. Failure to secure a Board of Medical Examiners has been, we believe, the only disappointment of the year, but this may be turned into a victory in the near future. Altogether the

past year has been a remarkable one for our profession.

For 1904 new problems arise. The thirteen Counties must be organized. The Journal must be improved. Work on a new bill for regulating the practice of medicine must be commenced. The profession must devise an effective contest against Tuberculosis, Pneumonia and Cancer. The State Charitable Institutions must be improved. An Epileptic Colony must be established. Plans must be devised for improving the morals and education of those already practicing medicine. Professional pirates must be driven from the State.

These and many other subjects worthy of our best efforts are before us. We invite every honest practitioner to enter our ranks and assist us in the noble and glorious undertaking.

GREATER CAUTION IN DISPENSING STRYCHNINE.

Scarcely a week passes without the daily presses recording the death of a child from swallowing strychnine pills prescribed for some older member of the family. So frequently has this lamentable accident occurred in recent years that it becomes a serious question as to the advisability of dispensing this dangerous drug in tablet or pill form. If given dissolved in water its bitter taste would doubtless prevent a child from swallowing a poisonous dose and adults, while they might object to the flavor, would probably continue to take the medicine. If absolutely necessary to give it in solid form some sort of container should be devised which would be too difficult for a child to open. We bring this matter up so that our readers may have their attention called to this real danger and if any better plan can be devised to prevent deaths of innocent children we should be glad to hear of and announce it.

A SYMPOSIUM ON TUBERCULOSIS.

The fight against the white plague has heretofore failed largely because it has commenced in the wrong quarter. Gentlemen who have felt themselves charged with a mission to stamp out tuberculosis have called congresses, national and international and have loaded great guns of information to be discharged in the academic air far above the heads of the common people. As might be expected up to this time and by these methods little has been accomplished. What is evidently necessary is to secure the co-operation of the family physician. When he understands the steps necessary to be taken it will not be long until substantial progress is made in what will be the greatest conquest of the 20th century. No person who understands the question can now doubt that tuberculosis can be as successfully eradicated from

the list of diseases as is smallpox. Occasional cases of both diseases will always appear because of the perversity of human nature.

* * * * * It is with great pleasure therefore that we learn from J. W. Pettit, Chairman of Section One that a symposium on Tuberculosis will be held at the Bloomington meeting. In writing of the subject Chairman Pettit says:

I am making very elaborate plans for the presentation of a practical symposium on pulmonary tuberculosis at our next meeting. The statistical features will be confined to this state. This will include mortality, influence of climate, topography, occupation, residence (city and country), and such other data as may be thought desirable by the gentlemen assigned to take part. Prophylaxis, treatment, and such other features as come within the scope of the subject will be presented in such a clear concise and forceful way that it will undoubtedly result in stimulating an interest and arousing an enthusiasm that will lead to practical results.

While the papers will be scientific and of value to the profession they will be devoid of technicalities which will make them of educational value in enlightening the public. In order that they may be given the widest publicity possible I shall ask the co-operation of the secular press throughout the state to publish at least very liberal abstracts of the several papers presented.

The gentlemen selected will all be men who need no introduction in this or any other state, and can be relied upon to say the right thing in the right way.

My object in writing this letter is that you may know something of the plan and give notice to the profession in your editorial columns. I believe such an effort consistently and persistently carried out, will arouse the profession from its present attitude of hopelessness, and through them, the public from its apathy toward this unfortunate class. The success of the hygienic, dietetic, rest and exercise treatment of pulmonary tuberculosis as carried out in sanatoria and at home proves conclusively that the disease is not only curable but easily preventable. These

and other kindred facts will be brought out in the papers and the discussion. It is time for the profession as a whole to face about on this great problem and the proposed symposium will be an important factor in initiating and giving direction to both lay and professional sentiment.

WHAT IS MEANT BY THE NATURAL VITAL RESISTANCE TO THE INFLUENCE OF TOXIC OR DISTURBING AGENTS IN THE LIVING HUMAN BODY? THE VIS MEDICATRIX NATURAE OF EARLIER WRITERS—WHAT ARE THE ELEMENTS OF WHICH IT IS COMPOSED; AND HOW MAY THEY BE STRENGTHENED OR IMPAIRED?

In the preceding number of the Journal the importance of recognizing a clear distinction between contagious and infectious diseases was stated. A protest was made against allowing the search for bacterial germs as specific causes of disease, to cause less attention to the predisposing or more remote causes; and also against permitting the search for specific remedies to lessen the efforts to adjust our remedies to each stage in the progress of all acute diseases, in such a way as to assist the natural processes by which the living body frees itself from the presence of disturbing elements of various kinds. And this led directly to the question, what constitutes the natural vital resistance to toxic or disturbing agents, and how may it be increased or diminished? Through all the ages, from the days of Hippocrates to the present time, the pages of medical literature have contained the words "Nature," the "efforts of nature," and the "Vis Medicatrix Naturae," as personifying an active, if not intelligent force in living animal bodies exerting an important, if not a controlling, influence in the prevention and cure of diseases. At the present time many writers and investigators use the words "vital resistance" to indicate the same force or influence as "nature" or "efforts of nature." But neither they nor their predecessors have at-

tempted to explain just what vital or physiological properties and processes constitute "nature or vital resistance." Thus, Hippocrates declares "the physician is a servant, not a teacher of nature;" and that he should "follow nature in the treatment of diseases." But how is he to follow or imitate nature unless he sees clearly what constitutes nature, as used in medicine, and the modes in which it may be influenced. A careful study of the subject shows that the natural vital resistance to the influence of toxic agents is composed of or dependent on, the coexistence of a healthy, vigorous condition of the protoplasm of which the structures of the living body are composed; a healthy active condition of tissue metabolism, and of the secretory and excretory functions; and an unobstructed circulation of well oxygenated and decarbonized blood. That the protoplasm which constitutes the physical basis of all living organized structures varies much in its properties in different individuals of the same species, is very generally conceded. In one, it displays an active vigorous power to select from the materials with which it is in contact that which is necessary, for its own growth or repair, and to reject all else and thereby preserve its own integrity and increase the individual tenacity of life.

In another this same power is much less active; the processes of growth and repair are easily disturbed or arrested, and the resistance to the influence of toxic agents is diminished.

In still another, the protoplasmic properties are perverted in such directions as to constitute a constant tendency to the development of structural degenerations or morbid growths, by which the vital resistance is impaired and the duration of life much diminished. The essential conditions for producing and preserving the most perfect and active protoplasm are healthy parentage, whole-

some food, pure air, good water, comfortable clothing, and judicious daily exercise of both body and mind. That the protoplasm constituting the impregnated ovum is derived from the protoplasm of its parents probably no one will deny. And as like begets like, if the protoplasm of one or both parents is imperfect, similar defects will in due time appear in that of the offspring, constituting hereditary defects in some so great that life ceases before birth or during infancy, and in others so slight as to be manifested only in the middle or later periods of life. But when the protoplasmic inheritance has been most perfect in the offspring, it may undergo subsequent impairment by either the persistent use of defective or unwholesome food, or of confined and impure air, or by the daily use of small doses of anaesthetic and narcotic drugs, or by the long continuance of mental anxiety and despondency. Food may be defective either in quantity or from the deficiency of one or more of the constituents necessary for the growth or repair of the protoplasm of the blood and tissues; or it may be unwholesome from the presence in it of materials that disturb the natural metabolic and excretory functions of the body; and in either case, the integrity of the protoplasm and the vital resistance to toxic influences are both impaired. The same may be said concerning the habitual use of confined and impure air, and of impure water. That the presence of a sufficient quantity of free oxygen in the blood of man is essential for the maintenance of health, is a fact too well known to need discussion. On its constant presence in the circulating blood depends all cerebral and nerve sensibility, and all natural tissue metabolism and excretory activity. For man, it is derived solely from the atmospheric air, and enters the blood through the air cells of the lungs, and is carried with it to every organized struc-

ture of the body. Whatever diminishes it, lessens the nerve sensibility and muscular strength, and impairs the activity of the protoplasm as seen in both retarded metabolism and excretion. Consequently all confinement in poorly ventilated and uncleanly rooms lessens the protoplasmic activity and becomes an important predisposing cause of disease. This is well appreciated by those who are striving to limit the prevalence of tuberculosis; and hence their constant demand for an abundant use of fresh and pure air, that there may be more oxygen in the blood. There are, however, other agencies actively and extensively in use in our country, and in all the countries of christendom, that are constantly exerting an injurious influence on the protoplasm of both blood and tissues; and in such directions as to greatly diminish the natural vital resistance of the individual user, and that of his offspring. The agencies to which allusion is here made are to be found in the well known list of narcotic and anaesthetic drugs, all of which taken into the living body diminish more or less, all nerve sensibility and muscular strength, and impair the functions of all protoplasm in direct proportion to the quantity used and the length of time its use is continued. Of this list of drugs, those most extensively used are opium, tobacco, and alcohol as it exists in the various fermented and distilled liquors. When it is remembered that the people of the United States of America, consume more than a billion of dollars worth of alcoholic liquors annually, and nearly as much in value of tobacco; and that their ruined victims are found in every poorhouse, every public hospital, every asylum for the feeble minded and insane; every police station, criminal court, and prison, we have before us abundant evidence of this deteriorating and degenerating influence on every structure and

function of the human body, both mental and physical. It is useless to repeat the old assertion that all the destructive effects of alcohol are produced by "its abuse" i. e. its excessive use. For the simple fact that so large a proportion of those who commence using any, are unconsciously carried on to its use in excess, shows that its most moderate use injures the protoplasm of the brain and the digestive and secretory organs in such manner as to lessen their vitality or tenacity of life. It has been fully demonstrated that vegetables will not grow well in an atmosphere impregnated with the vapor of alcohol, and if the soil in which they are planted is watered with water containing 15 or 20 per cent of alcohol they die. Most careful and somewhat extensive investigations have proved that more than half of the children begotten while one or both parents were daily using some alcoholic drinks were still-born or died during the first two years after birth; while less than twenty-five per cent of the whole number reach the middle period of life in good mental and physical health. Add to the foregoing the well known tissue degenerations in chronic alcoholism, and the fact that every standard book on practical medicine published in the English language during the last half century, mentions alcohol as one of the important predisposing causes of pneumonia, tuberculosis, nephritis and cardiac and mental defects and disorders of every grade and we have abundant proof that the use of alcohol and other anaesthetics and narcotics are direct protoplasmic poisons and diminish man's vital resistance to the influence of toxic agents whether they be microbic, chemical or mental. Consequently while our sanitarians and the profession generally continue their warfare on pathogenic germs as exciting causes, they must war with equal diligence against the use of those anaesthetic

and narcotic drugs that are in such general use as predisposing causes, or they will ignominiously fail in the accomplishment of their high purpose. N. S. Davis.

NEEDS OF THE STATE INSTITUTIONS OF ILLINOIS—Continued.

For the last eleven years the experience of these institutions has been such as must vitally effect their present needs, and this must be kept in mind in making any intelligent suggestions for their improvement. It is a matter of history now that when the election of 1892 gave the control of State politics to a party which had been long out of power, its immediate result on the State institutions was a sweeping change in their management. New boards of trustees and superintendents were appointed at once, and soon almost the entire personnel of those in charge of the institutions in every capacity was changed, not for reasons of efficiency; but frankly for the purpose of creating a strong party organization by means of the appointments. At the end of four years many of these appointees had become good officials, but by a turn of political fortune the other party came back to power at that time and all the trustees, superintendents and most minor officials were summarily ejected and new ones of suitable political complexion were appointed. At the end of another four years there was a change not of party but of a wing of a party, and while the result was a smaller number of actual changes, yet every one who is acquainted with the institutions knows that the restlessness and anxiety within the institutions, the efforts to retain appointments, were never greater. "You see," said an employee, "the trouble is that not a person in this institution knows whether he is going to have a job after the first of January or not."

In addition to these periodical alterations, there have been many other changes. Some

have occurred because certain appointees have proved scandalously bad public servants, others because political interests have demanded removals, others because fine officials have sought positions of greater certainty in a more peaceful atmosphere.

To give a single instance—one hospital for the insane in Illinois has furnished to another State, heads for two flourishing private sanitariums, has given the New York State Pathological Laboratory its present head (this place is protected by the New York Civil Service Law), and two physicians from its staff is now head of one of the largest and most progressive general institutions in the Middle West. All these men—and hundreds of others less conspicuous—would have been kept in the service of the State which trained them, under a reasonable system of appointments.

The assessment of appointees for party political expenses is an inevitable detail of the present system of appointments, but one which is of minor importance as compared with the constant changes in the service; on the theory that the welfare of the patients is the primary object to be considered.

It is not necessary to point out in detail how these changes of control, which would absolutely ruin any private business enterprises, must impair the fine professional feeling which can alone lift the institutions above the plane of lodging houses; but it would be childish to point out the special needs of the various institutions, the improvements needed in their technique, without recognizing that the *sine qua non* of any genuine improvement is the enactment and faithful enforcement of a merit law governing appointments. In the next issue we shall make some suggestions as to special requirements of some of the institutions. (*To be continued.*)

Correspondence.

OSTEOPATHIC TREATMENT OF URETHRAL STRICTURE.

To the Editor of The Illinois Medical Journal:
Some weeks ago a young man called at my office, requested an examination of his condi-

tion, and asked me if I had any objections to the continuance of the "treatment" of one whom he termed an "osteopathic physician." I replied that I was considerably interested in medical science, was very willing to learn, but that I would like to know what the gentleman referred to expected to accomplish, and for this purpose requested a personal conference with him. The patient, amongst other things, had a dense fibrous stricture in the deep urethra, the canal barely admitting a No. 4 (English) sound.

On meeting the osseous practitioner I explained to him the pathologic condition in the urethra and asked him to explain to me what he expected to accomplish by manipulations applied to the spine. I was then treated to one of the most befuddling discourses that I ever heard. The real anatomy of the region involved, the phenomena of inflammation and its results, the actual blood vessels and nerves concerned were ignored, and instead followed a senseless harangue about "dislocated vertebrae" and other imaginary conditions. The patient, however, was profoundly moved by all this nonsense. The further the illiterate dabbler wandered from the subject the better he seemed to like it. On leaving the conference, arranged for my enlightenment, I reached the conclusion that profound ignorance is harder to acquire and maintain than moderate wisdom.

The medical profession is often charged, not always unjustly, with being narrow and intolerant, but after carefully investigating the above case my conclusion is that the "physician" who undertakes to cure a perineal stricture ought to be at least narrow enough to pay some slight attention to the part affected. Treating an obstruction in the trachea, an opacity in the lens, an occlusion of the bowel and a stone in the bladder by laying hands on the spine does, I confess, appear a little too broad for those medical gentlemen whose association I am permitted to enjoy.

Howard Crutcher.

Chicago, December, 1903.

County and District Societies.

Fayette County Medical Society.

Regular meetings are held in Vandalia the second
Wednesday of January, April, July and
October. Membership 20.

Officers.

President Moses Haynes, Bingham
Secretary A. L. T. Williams, Vandalia
Treasurer H. D. Smith, Vandalia

At a meeting held July 8, 1903, Dr. F. Buckmaster, of Altamont, read the following paper on **Cutaneous Tuberculosis and Blastomycetic Infection, with Some Points as to Their Differentiation.**

Cases representing our subject are quite rare, as is also the literature of such cases, but I am



inclined to believe that such cases probably are often overlooked. Our case today, gentlemen, is one that, clinically, we might diagnose either as cutaneous tuberculosis or as blastomycosis with good reasons for so doing, yet by microscopic examinations of the pus present in the lesions we detect the tubercle bacilli, but fail to find any other organism present. Therefore, I will make the article as brief as possible consistent with giving a good working knowledge of the two infections under consideration.

Case History. Patient-male, age 13, father and mother living; is the oldest of several children in the family. Has been fairly well up to two years ago, except for the usual diseases of childhood, yet he has never been a stout boy.

Family History. Tuberculosis has existed plentifully in family relationship of both branches of his parentage. His mother is tolerably stout only. His father lately consulted me for a gastric disorder which I found to be gastric ulcer. His mother's parents and grand parents

are all living. The other children in same family are fairly stout.

History of Boy's Illness. Two years ago a lesion somewhat elevated appeared on the anterior surface of the right arm about medium distance between shoulder and elbow. The lesion is now about an inch long, bluish in color, somewhat elevated, and soft. It never pained much but has felt somewhat sore at times. This lesion about a year later was followed by a gradually increasing swelling in left inguinal region and before it "broke" and discharged pus, the boy says the swelling was like a cob lying along pouparts lig. There is a small channel or fistula left yet at the bottom of the scar. (No. 2.) Following this lesion last January were the others now seen on the abdomen below the umbilicus, over the thighs and posteriorly on the buttocks, especially on the left side. On this left buttock, especially laterally, (shown in Post. View in picture) are a great many small lesions, apparently recent. One small one also exists in the suprascapular region of right side. This he did not know he had. One large lesion is found on the dorsum of the left foot and one over the right ankle on outer side. Some of these lesions are as large as dollars, all are bluish in color and elevated and all are soft and easily penetrated by a probe and nearly all, especially the larger ones, contain pus. Some of the lesions are crusted over on the top. In the skin of the lower limbs, especially posteriorly, the veins are very plainly seen, the skin being quite transparent, this being the case more or less all over him. Has complained of much cough and expectoration for over a month now. I find slight infiltration of right apex, heart rapid and somewhat weak. Other causes for cough in lungs absent; irregular breathing present, kidneys normal, liver and spleen very slightly enlarged, appetite poor, abdomen and its contents otherwise seem normal. The boy is weak, has lost flesh and has felt sick for two years, yet he has not been treated all of this time. Hb. estimate 55 per cent. Bowels active, sleeps fairly well. Diagnosis either blastomycosis or subcutaneous tuberculosis, probably the latter. By microscopic examination I find tubercle bacilli, no strepto or staphylococci and no blastomyces, proving it not to be blastomycosis. For lack of time I did not make a blood count nor examine the sputum for bacteria, though the cough and sputum are seemingly very characteristic of tuberculosis as is his appearance in general.

This boy had been treated for furunculosis before I saw him, if we are to credit his statements as well as those of his parents. To differentiate in this direction would hardly seem necessary, yet since such a diagnosis has been made, we would easily exclude that disease by noting that the primary lesion began two years ago, being followed nearly six months ago by other lesions, not one of which has disappeared, either under medical or surgical treatment. The appearance of the lesions, their history and

especially their bacteriology more than easily excludes "boils." Then to consider what it really is we would begin by the statement that **Cutaneous Tuberculosis** is not a common disease, and is one presenting many difficulties to the general practitioner, especially in the way of diagnosis.

1st. Because of the great number of varieties which we find clinically.

2d. Because of the scarcity of the literature on the subject, and

3d. Because of the rarity of the disease itself.

One recent writer classifies skin tuberculosis into twenty-three different forms, all of which are more or less rare, lupus vulgaris being much more common in some of Europe's great clinics than in our own country. Not more than six or eight cases representing some of the rarest forms of this disease have ever been recognized, therefore, we will endeavor to simplify matters by a brief consideration of the commonest forms and of its general characteristics. The first form with which the general practitioner should be familiar is **Lupus** of which we find three forms, viz.: **L. Exfoliatus**, **L. Exulcerans** or **Vulgaris**, and **L. Hypertrophicus**, the **L. Erythematous** having nothing to do with skin tuberculosis. In **L. Exfoliatus**, red or yellowish brown spots are formed with a fissured or exfoliating epidermal surface. In **L. Vulgaris** we find the disease beginning in early life, its onset in adult life being very rare; it frequents the face and is characterized by a chronic inflammatory process forming brown-red nodules with a tendency to ulceration and subsequent cicatrization. When the tendency to ulceration is excessive it is called **L. Exedens**. When the amount of granulation tissue is a prominent feature, with very little tendency to ulceration, it is called **L. Hypertrophicus**. In examining the advancing edge of lupus we find nodules set in the skin like wax, varying in size from the head of a pin to that of a split pea. They are soft to the touch, perhaps they could scarcely be felt with the eyes closed, while syphilitic or other papules or nodules are hard and plainly felt. This soft papule is as characteristic of skin tuberculosis wherever found as is the fact also that when rather lightly pressed upon by a bead-pointed probe, the latter penetrates the lesion, being followed usually upon its withdrawal by a drop of dark red blood, but in this case we get pus. This means of differentiation is little appreciated in this country it seems, but is much relied upon in some of Europe's large clinics. This is not the case with the other three forms of ulceration here to be differentiated, viz.: syphilitic, epitheliomatous, or that due to blastomycetic infection. Another point of interest is that lupus rarely ever attacks or destroys bone, but will destroy cartilage, a fact often differentiating it from tertiary syphilis, especially about the nose. For a further discussion of lupus I must refer you to our standard books and journals. The second form likely to be met with by the general practitioner is **Tuberculosis Verrucosa Cutis**, which is caused by inoculation of the skin with bacillus tuberculosis. This inoculation may take place in any one of a number of ways and is most often met

with on face, hands, or about anal or genital regions, but may occur on any part of the body. Tuberculosis by inoculation usually presents itself in the warty form of which there are three varieties, viz.: **Verruca Necrogenica** or anatomists wart, **lupus sclereux** of Vidal, and **tuberculosis verrucosa cutis**, which was first discovered by Riehl and Paltauf in 1886. It is now known that these three forms so called are only different stages of the same disease. It is an affection which develops slowly and lasts for years. In some cases a lymphangitis extending up the extremity accompanies the lesion and here and there along the course of the swollen lymphatics, tubercular deposits develop, which fluctuate and finally form abscesses. This is known as **gummatous lymphangitis** and often leads to pulmonary involvement.

The anatomists wart usually occurs on the arms, back of hands, or fingers of physicians or nurses, and at first looks like a cluster of inflamed warts. Erythematous patches and pustules may also be present. It is to be distinguished from the common wart by the length of



time it has existed, by the area of blueness which surround it, by the fissures which penetrate its substance, and by the miliary tubercles which at times may be seen at the bottom of these fissures. When the plaques are of dollar size or larger they present an outer zone of a bluish color studded here and there with minute abscesses, the contents of which should be examined for tubercle bacilli, and other microorganisms, a middle which is usually an ulcer covered zone with warts and a central zone which is made up of scar tissue. This form can only be distinguished from blastomycetic or verrucous dermatitis, the latter usually due to streptococci, staphylococci or colon bacilli by microscopic examination of the pus and tissue.

A third interesting form and the form which is represented by the case before us today is the **Subcutaneous Variety** which is the most common of all cutaneous tubercular infections. The tubercular deposit which is located immediately beneath the skin may break down and form an abscess, the cold abscess of older writers. It may give the sensation of fluctuation on palpa-

tion with out the presence of pus just as tubercular granulations in a joint often do. This form is known as *scrofula-tubercular-gummata*, being so named by the French school. You will note the characteristic bluish color, the soft easily penetrated lesions, the chronic course and appearance of the lesions present, as well as their location and the breaking down of their contents, also the appearance of the patient and his family history count much in summing up his trouble, particularly as regards the prognosis. Fortunately for the patient but unfortunately for us, under the treatment the lesions have rapidly lost their characteristic appearance are less tender and are drying up and becoming much more solid, thereby, making the sensation to the touch and to the probe tests somewhat impracticable at this time. You will note that many of the smaller lesions have practically disappeared leaving a bluish red spot. The lesions so disappearing were the small and more recent ones. When a *scrofula-tubercular-gumma* is superficial and of disc form, that is, like a silver dollar set under the skin, the epidermal covering is of a bluish color and the granulations present may produce some fluctuation and the lesion is soft. The lesions may be limited to the face and be but one or two in number or they may be disseminate. The skin covering the subcutaneous deposit may be destroyed by ulceration leaving a denuded surface from which luxuriant granulations spring up forming a tumor-like mass which projects above the surface of the skin sometimes to a considerable extent. This is *scrofula-derma*. Another form which subcutaneous tuberculosis sometimes assumes is the formation of tumors of a bluish color which are pea-sized and larger. They project above the surface of the skin and are most frequently seen on the legs and thighs of children. Primary tuberculosis of the panniculus adiposus is observed, particularly in children in the form of flat subcutaneous nodules which gradually soften and break down and discharge. In some cases the pus may burrow extensively without coming to the surface. A fourth interesting form is the **Tubercular Follicles**. This variety is supposed to be caused by toxins absorbed from a tubercular focus, acting on the skin, a patient may have tubercular glands of the neck and toxins absorbed from these may produce eruptions of the skin. These eruptions are called follicles, dermatitis nodularis necrotica, tuberculides, paratuberculosis, and many other names, more than twenty in all. Individual cases of this form differ widely, but it usually occurs on the extremities, particularly the lower, in a papular form leaving a scar on its disappearance. It looks not unlike acne vulgaris, and these lesions are usually distant from the primary affection. Chilblains are sometimes produced by tubercular toxins and so may these lesions simulate lupus Erythematosus.

Diagnosis.

After a clinical examination of the local lesions here presented, and of the patient, one would not hesitate to diagnose these lesions as being either tubercular or blastomycetic infection. Without going into details one would most

likely place the blame on the side of tuberculosis.

1st. From the appearance of the lesions, especially No. (2).

2d. From patient's age, tuberculosis not being uncommon at this age relatively speaking, while blastomycosis has never been recognized in patients younger than twenty.

3d. Location of lesions, not uncommon for subcutaneous tuberculosis in children but is an uncommon location for blastomycosis the latter appearing usually on exposed parts such as the face, neck, hands, etc.

4th. The family history; tuberculosis being present in both branches of his parentage, a not unusual history in tuberculosis, but uncommon in blastomycosis, only five cases out of thirty-two having tuberculosis in the family tree.

5th. From the boy's general appearance, his make up and the threatened break-down of pulmonary apices which we would not expect in blastomycosis, as only two cases of blastomycetic infection of the lung. I believe have been recognized, one thought to be primary and the other known to be secondary to skin lesions. One known case of blastomycosis has been followed by tubercular break-down. Yet with all this seemingly good evidence in favor of tubercular infection, we are not justified in making a diagnosis without a microscopic examination of the pus present and of the tissue and if necessary making cultures and guinea-pig experiments, but in the latter procedure one must for a correct diagnosis rely upon the microscope and upon obtaining new cultures of the same organism used in the inoculation process. As a reliance upon gross appearances and symptoms in the inoculated pig will likely be very misleading.

I should like to have something to say concerning blastomycetic infection, to be able the better to make the case before us as plain as possible in the light of a differential diagnosis. Since his lesions must be either tubercular or blastomycetic. Not alone is this differentiation of diagnostic importance, but our therapy is one of the rarest games of chance if we fail to recognize the true nature of the lesions presented.

I would first say that as in cutaneous tuberculosis the literature upon the subject of blastomycetic infection is much limited, though a few good articles have recently appeared in the current medical literature, the best probably being that of Dr. Gilchrist of Johns Hopkins University to whom the name owes its origin. Senn in the recent edition of his *Principles of Surgery*, and Dr. Hyde in the last edition of his *Treatise on Skin Diseases*, have each presented a good article on the subject. Many able men but a short time ago regarded this disease as being connected with cutaneous tuberculosis, and some even regarded it as having a connection with syphilis. In thirty-two reported cases, in five only is there any family history of tuberculosis. Of these thirty-two cases, twenty-eight gave no evidence of tubercular or syphilitic infection. That the disease is not a syphilitic or tubercular infection is now proven beyond doubt. That it is a local infection of yeast mold fungi now seems likely. There are now several varieties of these organisms which are supposed to be cap-

able of causing the disease. They are almost always found in the budding stage, usually occur in pairs of unequal size, but may occur single or in groups, are doubly contoured, highly refracting bodies five to twenty microns in diameter and may be seen well in unstained preparations, or when stained with methylene blue; they may be found in the pus or tissue. Beer-wort gelatin is the most favorable culture media.

Satisfactory animal experiments have been made, the lesions reproduced as in man, from which the organism has again been cultivated. Hence to-day blastomycosis can probably be regarded as a distinct Entity, notwithstanding the fact that some Eastern and European clinicians stand contrary to this view. No case has been seen under twenty years of age, most cases are at or above forty and some few have occurred in old age. More men than women are affected, perhaps due to a greater exposure to infection in the former. Our section of the United States seems a very favorable locality, as most cases have been reported from Chicago. Some writers regard the protozoic infection as being the same disease as blastomycetic infection merely modified by climate, California being the origin of the latter. The family and individual history have little or no bearing on the disease, nor can any definite relationship be established as regards nativity or habits of the patients, yet most of them are laboring people. No constitutional disorder has been noted which could have any bearing on the origin of the cutaneous lesions. Traumatism probably have something to do with the primary infection. The disease is said to be auto-inoculous, and one case is reported wherein a physician contracted the disease at the site of a slight injury received while holding an autopsy on a patient who had died of blastomycetic infection. No two cases of this disease have ever occurred in the same family. Blastomycetic infection may occur in the bones, as reported in one case, in lymph structures, as reported in two or three cases in lungs, as has occurred in two or three cases, in liver, spleen, kidneys, etc., of same patient as has occurred a time or two, or of peritoneum, as has once occurred, but the mucous membrane has remained free from infection. These internal infections have been secondary to that of the skin, unless it be in the case of peritoneal involvement, as well as one of the pulmonary cases, in which the disease was thought to occur primarily in the lungs, yet it was accompanied by skin lesions of the same infection. Bushke divides the disease into three types (a) Blastomycetic septicaemia, (b) localized infection, and (c) the typical slow growing blastomycosis—the skin lesion. Blastomycosis is primarily a disease of the skin (also where the disease gains entrance to the system)—a dermatitis in its origin and career corresponding to a local infectious process having a chronic course. The disease begins in a papule or papulo-pustule, which soon becomes covered by a crust. The lesion slowly enlarges peripherally in the form of an indolent flat wart-like or crusted papule; as a rule the disease spreads over contiguous areas from the site of the original papule, but in a few cases new

foci have appeared and coalesced with the old. In lesions that have attained the diameter of $\frac{1}{2}$ inch or more the following characteristics are apparent. The patch is elevated from $\frac{1}{8}$ to $\frac{3}{8}$ of an inch above the surrounding skin. The surface is covered by irregular papilliform elevations, separated by clefts or fissures of varying depths, giving it a verrucous appearance. In the recent lesions and near the border of the older ones, especially of those which have been kept clean, the papillary projections are fine and the surface fairly firm, dry and wart-like. Portions of larger lesions, and especially those which have been untreated, are covered by more or less bulky and adherent crusts, on removal of which the papillary elevations are seen to be larger, lobulated, even subdivided and bathed with a sero-purulent secretion. Some of these crust-covered projections bleed easily. In exceptional instances the area under a crust may present the appearance of an ordinary unhealthy ulcer with exuberant granulations. Brayton, of Indianapolis, says: "If, on any part of the body, notably the exposed parts, a portion of the skin presents pustules, followed by small crater-like ulcers, which coalesce, causing progressive destruction of the skin, blastomycosis should be suspected." He also says that, "the occurrence of multiple acneoid pustules in close proximity to each other, occurring in unusual localities, unsymmetrically distributed and followed by necrosis and punctiform excavated ulcers, should call attention to the probability of blastomycosis." The base of the active lesion is always soft and more or less infiltrated with sero-pus, which on slight pressure oozes out between the papular elevations. In older lesions the papillomatous surface may be replaced in part with a thick elevated scar-like formation, pinkish white in color, irregular and often corded, but having a smooth, shining surface. The border of the area is one of the most characteristic features. It slopes more or less abruptly from the elevated roughened surface to the normal skin, from which it is sharply defined. It is smooth, of a dark-red or purplish color, is from $\frac{1}{8}$ to $\frac{3}{8}$ inch wide, and on close inspection is seen to be set with a large number of minute abscesses. Some of these abscesses are too small to be seen by the unaided eye. Some are as large as a pin head, some are superficial, but many, especially the smaller ones, are deep-seated. When punctured with a needle a glairy muco-pus exudes, in which the causal organisms are best studied. Abscesses of the same sort are seen also in other parts of the growth and not infrequently on the thick scar like tissue described above. Usually it requires a number of months before the original patch attains a diameter of an inch or two. It may remain indolent for months or years with irregular periods of activity and progress. The majority of the lesions attain the size of a dollar on the palm, and some get much larger. As the disease extends at the periphery healing frequently occurs in the central portion. In this manner large areas may be involved in various stages of the process. Healing may occur spontaneously, but whether spontaneously or from treatment, the first indication of heal-

ing is found in the gradual flattening and disappearance of the papillary projections, partially by absorption and partly by dessication and exfoliation. At the same time the amount of the secretion from the underlying base diminishes and the whole patch assumes more of an ordinary Verrucous appearance. In many instances the papilliform surface is replaced temporarily by the hypertrophic scar-like tissue described above, which in turn gradually disappears and gives place to the characteristic cicatrix which eventually becomes soft, supple, nonattached, pinkish-white, and on the whole very inconspicuous, though sharply outlined from the surrounding skin. As a rule the resulting deformity is very slight. It is not uncommon to see areas that have apparently healed, again become more or less covered with actual points or areas of the disease, because of the fact that minute abscesses may often be found imbedded in the scar-tissue of the old lesion, which serves as an infection atrium in lighting up the disease anew. Pain may be very severe in well advanced progressing lesions and may lead to the continuous use of opiates, or as in the less severe cases, it may amount to almost no discomfort whatever. The histopathology of this disease is very interesting, but for lack of time we must omit it.

Differential Diagnosis: In differentiating blastomycosis from those tubercular lesions most closely simulating it, one depends upon the characteristic border and the deeply set miliary abscesses, which in so far as is known at this time, I believe are considered peculiar to the former disease. The therapeutic test and the soft, supple, pinkish-white, nonadherent, slightly disfiguring scar—the latter differing widely from tubercular scar—are an aid in diagnosis. Adenopathy is very rare in blastomycosis and common in tuberculosis, while constitutional symptoms of blastomycosis are quite rare, also, and depend upon metastasis from the primary skin lesions. But to settle the diagnosis, one must depend upon the microscopic findings of pus and tissue taken from the lesions, more especially that from the advancing border.

Prognosis.

Death due to skin lesions alone in blastomycosis, I believe, is unknown, but death is caused by metastasis in internal organs which is much more likely to occur in man than in animals, or to complications—tuberculosis having once caused death of a blastomycotic patient. In tuberculosis there is a grave danger of systemic infection or break down following the cutaneous lesions or the former may precede the latter.

Treatment of Blastomycosis: An early recognition of the primary lesions and their appropriate care, not only to cure them, but by so doing to prevent metastasis, cannot be too much insisted upon; locally, keep the lesions clean and remove them surgically, if possible. If impossible and the lesions are very painful, one had best use caustics or the cautery to destroy them, which stops the suffering. X-ray may do some good. Curetting the lesions is

thought to be bad practice, as it has seemed to promote dissemination and internal metastasis, which will probably be fatal. Inwardly, Iodid of Potash, possibly up to 200 to 500 grs. a day, which always does good and may so nearly heal cutaneous lesions that the balance can be eradicated by excision. Look after the patient's hygiene. In tuberculosis of the skin, local treatment, such as 25 per cent of guaiacol in olive oil, the X-ray, cleanliness, etc., probably may help, yet sunshine, outdoor life, six to twelve raw eggs in milk each day, plenty of good butter, hygienic surroundings in general, and plenty of recreation, rest and sleep—in fact, anything that builds up the system, we should regard as our mainstays. Some lesions may be removed surgically and the X-ray may benefit some lesions, especially lupus. Inwardly care for the stomach, secretion and excretion, and a little tonic treatment, chosen from the list of irons, arsenic, guaiacol, gaduol, codliver oil preparations, hypophosphites, strychnine, etc., upon indications, is the finishing touch in the way of treatment.

I gave this boy 12m Tr. ferri chloridi and 5m Lig. Potass. arsenitis in water 1½ hours after meals. One dram of syr. of hypophosphites in water ½ hour before meals. Regulated his habits and diet and did nothing to the skin lesions except to puncture some to obtain some pus for microscopic diagnosis.

At this time, December 1, 1903, the case above referred to is practically recovered. He is quite stout, has gained much flesh, blood and urinary tests practically normal, and the skin lesions proper have all disappeared, though the characteristic bluish-red scars mark the former site of the lesions. Lungs and other internal organs now normal.

Another interesting case of skin tuberculosis I saw on the 4th of last July (since preparing this article). Case: A male, about 40 years old, a veterinary surgeon, and in good health. About six weeks previous, developed a growth, hazelnut in size, on the dorsum of the right hand, corresponding to the second metacarpal space. His physician had given him salves to apply, and a few days previous to the patient's visit to me, his physician had roughly examined the hand, making undue pressure in palpating it, which was followed by a swelling of the whole hand. On his visit to me, the hand was considerably swollen, of a dark-red color, the area surrounding the growth being bluish in color. The warty growth itself was superficially fissured, though one deep fissure divided it deeply, separating it into halves, though this resulted from the previous attendant's rough handling. It presented all the appearances of the tubercular wart, upon which suspicion I widely removed it with the scalpel, afterward dressing the hand in a hot, 50 per cent alcohol dressing. The swelling subsided, the wound healed nicely, and at this time it seems a perfect recovery. A subsequent microscopic examination of the removed tissue revealed tubercle bacilli rather plentifully.

I sometimes wonder when we, as physicians, will learn and practice careful palpation of infected tissues or regions. How easily a localized infection may be disseminated by a rough.

squeezing, unscientific sort of handling, by some styled palpation.

In preparing the above article I have referred freely to writings of Gilchrist, Brayton, Hyde and Montgomery, Jas. W. Walker, H. G. Anthony, N. Senn and others.

 * Bureau County Medical Society. *
 *

 Regular meetings held in Princeton the second
 Thursday of November and May.
 Membership 40.

Officers.
 President J. H. Franklin, Spring Valley
 First Vice Pres. C. H. Kemp, Tiskilwa
 Second Vice Pres. J. C. White, Seatonville
 Sec'y and Treas. O. J. Flint, Princeton

At the meeting held Nov. 12th, the following papers were read:

Cystitis.

F. Kreissl, Chicago: Although every cystitis is of a mycotic origin, the mere presence of the microbes in the bladder is not sufficient to start the inflammation. The concurrence of several conditions is necessary to produce cystitis. Among these may be mentioned lesions of the mucous lining and the submucous tissue, congestion in the bladder wall, and urine retention. Yet we frequently see complete retention existing for a number of years without ammoniacal decomposition of the urine or cystitis, and the same applies to traumatic lesions of the mucous membrane caused by the presence of concretions in the bladder, as long as pathogenic germs do not enter it. Only in this way we can explain those cases in which, in spite of careless catheterization for a long time, cystitis does not appear, while in others, notwithstanding the greatest care, cystitis sometimes is observed because retention and congestion have prepared the ground for the infection. The latter may enter the bladder cavum, (a) ascending from without through the urethra; (b) descending from the kidney through the ureter; (c) embolically through the circulation into the tissue and by immigration of the microbes from adjoining organs penetrating the bladder wall.

The ascending infection is mostly of gonorrheal, much rarer of a tuberculous, nature. The microbes take possession of the viscus by immigration from the urethra after having existed there for a while, or they are brought into the bladder by instruments. The gonorrheal infection of the bladder was not recognized up to a few years ago, and it must be admitted that the majority of these cases owe their origin to a mixed infection. Yet Wertheim's investigation, who obtained from the excised portion of the inflamed bladder wall a pure culture of the gonococcus, where gonorrheal urethritis had preceded the bladder symptoms, proved conclusively the existence of true gonorrheal cystitis.

The ascending tuberculosis of the bladder, which, according to recent investigations, most frequently originates in the epididymis, also immigrates into the bladder through the prostatic urethra and establishes itself in the fundus. This is of differential diagnostic value, for those who are familiar with cystoscopy, as tuberculous ulcers and tubercles situated in the poster-

ior wall speak for ascending or primary tuberculosis of the bladder, while when located around the ureteral mouth, descending tuberculosis may be well suspected. Notwithstanding these germs traceable to a distinct pathologic process, the normal urethra is inhabited by a collection of pathogenic microbes, in all probability entering it from the preputial sac and the vulva, which, when carried into the bladder by instruments or irrigation fluids, under favorable conditions may start a cystitis.

It also requires mentioning that infection from outside occurs through septic instruments, and likewise fluids used for bladder irrigation, and also through septic lubricants. The shortness and wide lumen of the female urethra and the lack of a proper sphincter apparatus will explain the frequency of spontaneous cystitis caused by the immigration of the colon bacillus, of which the vagina and vulva abound.

Lesions of the bladder wall are of traumatic, idiopathic or embolic nature. Traumatism occurs from without the viscus or within. The more common forms of traumatism are the protracted act of labor, the manipulation with obstetrical instruments, careless and forcible intravesical procedures with cystoscopes, catheters, sounds, lithotrites, etc., etc., and the presence of stones and foreign bodies in the viscus.

Among the idiopathic and embolic lesions I would mention the simple ulcer, the leukoplakia and the syphilis of the bladder. We know different types of simple ulcer. The first, *ulcus simplex chronicum*, appears in bladders not affected by cystitis; it remains latent without any symptoms until pain and hematuria point to its presence; much later cystitis and pyelonephritis set in. If recognized in time, it can be easily cured; if let alone, tuberculosis or carcinoma might develop from its basis. The *ulcus simplex acutum* is of a gangrenous character, leading to perforation, often times as rapidly as the *ulcus ventriculi*. It remains latent and is not recognized until symptoms of perforation peritonitis and internal hemorrhage call for abdominal section.

Syphilitic cystitis is a rare form of visceral syphilis, but not so very rare, if one would take pains to inquire for a previous syphilis in every dark case of cystitis. It appears usually as a gummatous deposit in the bladder wall, or as an interstitial process.

The most prominent symptoms of acute cystitis are tenesmus and dysuria; both are produced by the increased sensitiveness of the inflamed bladder, which responds with violent contractions to a degree of tension not perceptible under normal conditions. This dysuria disappears at once upon opening of the bladder or the placing of a catheter *a demeure* in the viscus, though the inflammation is still present. I emphasize this and a few other points because their correct understanding furnishes valuable directions regarding the treatment of cystitis. The most useful objective symptom is the peculiar condition of the urine. There is no cystitis with an absolute clear urine, consequently we find more or less cloudy urine in proportion to the grade of inflammation. The turbidity is due to the amount of pus, sometimes mixed with blood, and crystalline or amorphous material.

Microbes are a constant part of the urine in cystitis.

The reaction of the urine is of very little value for the determination of the origin of the pus, and it is impossible to positively state that alkaline reaction speaks for cystitis, while acidity points to pyelitis. The alkaline reaction of pussy urine depends on the presence of urea decomposing germs and the time they are allowed to exert this quality on the urine while in the urinary passages. Thus it happens that in uncomplicated cystitis acid urine is voided in spite of the presence of urea decomposing microbes, while in a retention bladder caused by strictures, paresis, prostrate hypertrophy and diverticle the reaction will be alkaline. Likewise we find in renal suppurations, from cystic degenerated kidneys from a dilated renal pelvis, in ureteral obstructions, ammoniacal urine, even when a co-affection of the bladder is excluded with absolute certainty.

On the other hand, urine of alkaline reaction is found in cystitis caused by not urea decomposing microbes, but the urine contains carbon phosphates or neutral phosphates. Red litmus paper turned blue by such urine retains the blue tint when dried, while the blue tint disappears under the same process if caused by ammonia, the latter being volatile. Constant acidity of the urine in cystitis is characteristic in colon bacillus infection and tuberculosis. The latter especially possesses the faculty of keeping the urine acid, even in the presence of urea decomposing germs, which characteristic has led us to diagnose tuberculosis in those cases of cystitis in which no microbes at all are found, but as a constant symptom an acid urine loaded with pus.

The question of the presence and the quantity of albumin in the urine is of great importance because it tells us better than anything else—except ureteral catheterism—whether the infection we are studying is of the bladder or the kidney. In the examination of the urine with reference to the grade of pyuria and albumin, we have a very satisfactory and simple means of differentiating cystitis and pyelitis, and one which in the majority of cases will give accurate results. Pyuria due to cystitis, even of high grade, is associated with but a small amount of albumin—unless accompanied by hematuria. On the other hand, in all cases of pyelitis, even if the grade of pyuria is low, there is always, or at least almost always, a considerable quantity of albumin present.

In the chronic form of cystitis, one or the other symptom might be less accentuated or disappear for a while, until by some cause a relapse occurs which practically is nothing but an exacerbation of the old latent cystitis. This is frequently observed in gonorrheal cystitis of the trigone, in chronic vesical ulcerations, and in cystitis of the vesical neck. These are the cases which puzzle the physician, and which can only be recognized by the aid of the cystoscope. In a paper on vesical ulcerations, which I read in the Chicago Medical Society about four years ago, I have expressed myself on these conditions quite extensively. The presence of pus in the urine alone does not permit a diagnosis of

cystitis, although it is often done. It might be due to the presence of a nearby abscess cavity connected with the bladder, as it occurs in perityphlitic abscesses in pus tubes or in suppuration of the prostrate and seminal vesicles. That tenesmus and dysuria are not symptoms exclusively peculiar to cystitis, but are also characteristic of pathologic conditions in the ureter and renal pelvis, is well known, and therefore cannot be used as significant of cystitis in the absence of other symptoms. Only a summary of all the subjective symptoms taken together with a chemical microscopical, and bacteriological study of the urine will help us to establish the diagnosis of cystitis, but if we wish to proceed scientifically and trace the cause of cystitis, which practically is but a symptom, we will have to employ the aid of the cystoscope and eventually ureteral catheterism. The cystoscope demonstrates to the eye the typical gonorrheal lesions in the trigone, the ulcerations in the bladder wall, and their different characteristics; the presence of stones and diverticula, and the entrance to abscess cavities. The catheterism of both ureters puts us in a position to positively ascertain if the pus and blood in the urine come from one or both kidneys, or if its source is the bladder alone. With this remark, I do not advocate the indiscriminate employment of cystoscopy, but I plead for it in cases in which the diagnosis is not absolutely clear from the beginning, or where the symptoms do not yield to the treatment in a reasonable time. Here let me call your attention to the close relation between the vesical sphincter and the adjacent rectal tissue. Proctitis, rectal fissure and ulceration, inflamed hemorrhoids, produce sympathetic tenesmus and other vesical symptoms, especially in the irritable bladder of neurasthenic individuals, and many a stubborn so-called cystitis, cystospasms, and other conditions referred to the bladder will rapidly disappear upon an inspection of the rectum and its proper treatment.

There are two main principles in the treatment of cystitis, no matter what the particular nature of the disease be, and they are local and general. The popular one, and, as I believe, the less efficacious of the two, is the general treatment by medical and hygienic measures. While the general principles may not be altogether neglected, a local antiseptics of the infected bladder is of primary importance, and is of such simplicity as to be within reach of every practitioner. I do not under-estimate the value of internal antiseptics and diuretics; it is possible to make the urine a less favorable medium; we can flush out the kidneys, but neither the stomach nor kidneys are tolerant of large quantities of santol, salol, boracic acid, benzoic acid, and urotropin, and the quantity must be large to act effectively upon a process in the bladder.

Where these remedies, when employed exclusively, gave satisfaction, a close scrutiny of the case would have demonstrated a pseudocystitis, as we find them when irritating substances are eliminated through the urine, causing congestion of the mucosa or after exposure, cold, etc. One of the symptoms of acute cystitis, the bladder's intolerance of tension, gives the key to its treatment, and also the reasons

why we should refrain from a medication which increases the secretion of the urine, and with it the desire to urinate, and the painful contraction of the bladder. Large and even moderately small local injections are for the same reason objectionable. We must employ the method of instillation, of applying locally drop by drop the active medicinal solutions to the inner surface of the bladder wall. The strength of these solutions used, the small quantity of fluid instilled, and the slowness with which one by one they enter the viscus, are the important points to be attended to. Instillations should not be hurriedly given, or they then become injections; the solution, though by no means always a caustic one, is far stronger than could be used in the form of an injection, and this constitutes the chief virtue of instillations. The instruments required are a small graduated syringe, and the instillator, which is a perforated, gum elastic, olive-tipped bougie. In Guyon's syringe the content is one dram. In the first place, the bladder, as in all instrumentation of the urethra, should be empty. The quantity used should never exceed one dram. The strength of the solution that may be used is as great as its quantity must be small. While the bladder could not be irrigated with a nitrate of silver solution stronger than 1 in 500, instillations of from one to five percent may be used with perfect toleration. Injections of solutions of 1 in 20,000 of bichloride of mercury may be used, but as instillations the strength of 1 in 5,000 and 3,000 is of daily use, and some patients even support 1 in 1,000. The substances that will be found most satisfactory may be divided into (1) anesthetics, and (2) antiseptics.

1. Anesthetics are very valuable as treatment in themselves and as a preliminary to instillations of more or less painful solutions. In mild cystitis, where there is no excessive tenesmus to tension, antipyrin in ten times its weight of water renders the mucous surface of the bladder less sensitive to the subsequent application of nitrate of silver. In very acute cystitis guaiacol is superior to antipyrin, and cocaine, especially in the formula of Pirot: Iodoform, 1 part; guaiacol, 5 parts; sterilized oleum benne, 100 parts, of which solution one dram may be injected three times daily without any inconvenience. Great care has to be exercised in applying cocaine to the bladder cavity, on account of its ready absorption from raw surfaces. A good rule is never to exceed the injection of one and one-half to two grains of the drug.

2. Antiseptic Instillations. Perchloride of mercury in solution of 1 in 5,000 or 1 in 3,000 will be found of great service, especially in the constant and often prolonged agony of tuberculosis cystitis. Nitrate of silver is perhaps the most valuable local agent in the treatment of cystitis. The more acute, the more painful the cystitis, the more frequent the desire to micturate, the more clear is the indication for instillations with nitrate of silver, hence its effect little short of astounding in acute gonorrheal cystitis.

In the more chronic state irrigations of the viscus become necessary when viscid pus clinging to the bladder wall or mineral deposits in a

diverticle call for a thorough cleansing preceding other topical applications. But even then one should never inject more than two ounces at a time, because the bladder muscle reacts differently towards slow or rapid tension, a fact of which one may convince himself by rapidly filling a normal bladder with ten ounces of fluid. There will be tenesmus for quite a while afterwards, while the same bladder does not take notice of such a quantity if accumulated in its viscus in the natural way and time. The result of such rapid filling of a diseased bladder is seen in renewed congestion and secretion, and many a protracted cystitis is due to this procedure. Moreover, the cleansing of the bladder wall is much more thoroughly accomplished by small and repeated flushings than by a few large ones. For all these reasons a sterile piston syringe is preferable to the time-honored irrigation can. Chinisol and pyocanin in a solution of 1 in 4,000 will have a marked deodorizing effect on a very offensively ammoniacal urine. Salicylic acid in solutions of 1 in 3,000 dissolves phosphatic debris and renders the alkaline urine neutral or slightly acid. A saturated solution of boracic acid or a solution of 1 in 3,000 of acetate of lead has a soothing effect in simple congestion of the mucosa associated with a mucous secretion, but it is of no antiseptic value.

None of these applications will be of assistance by virtue of their deodorizing, astringent and slightly antiseptic effect; the profuse flushing of the viscus does partly remove numbers of pathogenic germs, but to obtain a pronounced benefit they must be followed by the above mentioned instillations.

If with all these procedures no marked improvement be noticeable within a reasonable time, one has to resort to cystoscopy to clear up the real condition back of the symptomatic cystitis, which is not amenable to a radical cure unless the original cause be removed.

Stones will have to be crushed or removed by lithotomy. Ulcerations must be curetted and cauterized through the operative cystoscope, or excised through a suprapubic or a vaginal opening, as the case may require, and a rebellious cystitis dolorosa, where the whole bladder wall represents a large sloughing ulcer, requires broad incision and drainage, like any other abscess. Topical applications and internal medication will fail when strictures, prostatic obstructions or a diverticle maintain in a pool of stagnating residual urine an excellent culture medium for microbes, and it will be impossible to return in this way the bladder wall to normal conditions if a continuous or interrupted stream of pus from adjacent organs or from the upper or lower urinary ways floods the barely cleansed vesical cavity. Neither will local treatment in secondary tuberculosis cystitis be efficient, unless we support the reconstructive power of the tissues by a general hygienic treatment of the system.

In closing, I wish to say that I know I could have said much more on this very interesting subject, but in doing so would have trespassed on your time and patience. My object was to call your attention to a few salient

points in the etiology, diagnosis and treatment, as they might be serviceable for the practitioner, in this widespread ailment, and who does not possess the facilities of all the complicated appliances and the experience of the specialist.

1006 Stewart Building.

Olshausen's Technic of Caesarian Section.

Denslow Lewis, of Chicago, spoke of modern Caesarian section. He insisted on the performance by the general practitioner of this truly life-saving operation, in suitable cases, as freely and readily as an amputation of a leg or the reduction of a dislocation would be undertaken in an emergency. During the past year spent by the speaker at the University of Berlin the opportunity was afforded of witnessing 14 Caesarian Sections in the Frauenklinik of that city. The operations were performed by the director, Olshausen, or his assistants, and resulted in saving all of the children, and all but one of the mothers. Adequate knowledge of this operation is considered so necessary that Olshausen makes it a point to so arrange that each assistant, before leaving the hospital, will have performed the operation at least once. It is regarded of great importance to students, and whenever practicable, the operation is done in the amphitheater, so that each man may have occasion to learn thoroughly the method of operating, and be prepared himself, when he has graduated and is in practice, to undertake an abdominal section in a parturient woman as he would any other emergency operation.

The technique is simple. The operation is preferably performed when the os is dilated to the size of a silver dollar and the bag of waters is yet unruptured. At the start a hypodermic injection of ergotone is given in the thigh. The woman's abdomen is scrubbed with soap and water for a few minutes and wiped dry with a sterile towel. It is then washed off with alcohol and finally, with a bi-chloride solution. The operator's hands are similarly prepared. An incision is made in the median line sufficient in length to allow the uterus to be brought out. The abdominal wall is thin in the parturient woman and there is no danger of wounding the intestines, which are on either side of the uterus, well away from the site of the incision, and with ordinary care the omentum will not be cut. There is no appreciable hemorrhage from the abdominal incision; no bleeding vessels have to be caught up with forceps. The incision is made quickly and the uterus is gently drawn forwards through the opening, while volsellum forceps, protected with gauze, hold together the edges of the abdominal wound behind it and temporarily close the opening, so that the uterus cannot fall back into the abdominal cavity or the intestines escape. This is the work of perhaps two minutes. The assistant now steadies the uterus by holding it just where it emerges from the abdominal cavity, with the thumb and fore-finger of each hand laid flat on the abdomen. There is no rubber ligature, no compression; simply a steadying so that the

uterus shall not slip back unexpectedly. The determination of the placental site is now to be made by the condition of the veins, and the relationship of the round ligaments. If the ligaments run parallel, the placenta is on the posterior wall; if they diverge sharply from their fundal attachment, the placenta is situated on the anterior wall. Of course the veins will be larger on that portion of the uterus which corresponds to the site of the placenta. If, for instance, the placenta is attached to the right upper portion of the uterus and on the posterior wall, the round ligaments will run parallel, but the veins on the right side will be markedly enlarged in comparison with those of the other side. It is preferable to avoid the placental site in making the uterine incision, but it is not a matter of such very great importance. With the uterus steadied by the assistant's hands, the operator cuts carefully but quickly through the uterine wall, usually in the median line, by successive incisions until the opening made is large enough to permit the introduction of his hand, the rupture of the amniotic sac and extraction of the child. The cord is cut between two ligatures or forceps and the child handed over to another assistant. In the meantime the uterus contracts, as a rule, at once, and the assistant holding it prevents it from falling into the abdominal cavity. This contraction of the uterus usually loosens the placenta so that it is easily removed through the uterine wound, but if it is adherent, it can be gently separated. The operator now looks for hemorrhage. As a rule it has been unnecessary to apply forceps while the incision was being made and only exceptionally is it necessary now. If retraction is insufficient, the uterus can be manipulated, but in most cases moderate compression applied once or twice by seizing the uterus in the palm of one hand is enough. The closure of the uterine incision now follows. Olshausen uses strong catgut for this purpose, although in the last edition of his text book, silk is recommended. The sutures are interrupted, include the musculature alone, are placed about half an inch apart, and usually number ten to fourteen. It is not of vital importance if the mucous membrane or indeed, the peritoneum, is included. When these sutures are tied, the uterus is often again compressed gently to expel clots, and the operator again looks for hemorrhage, which, if found, is controlled by additional superficial sutures in the musculature. The uterus will now have materially retracted and presents only a narrow peritoneal incision, which is closed by a continuous Lembert catgut suture—not too thick—which turns in the edges. Once more, if necessary, clots are expelled by pressure and in rare instances a few additional sutures are placed, to control the oozing. Finally, the uterus is returned to the abdominal cavity into which not a drop of blood or amniotic fluid will have entered. The abdominal wound is closed as in other abdominal sections. Olshausen sews up with continuous catgut sutures, first the peritoneum, then the musculature, then the fascia, and finally the skin, each layer by itself. In Caesarian section, the abdominal wall

is so thin that usually three rows of sutures suffice.

Dr. Lewis spoke of modifications of this technique in cases of hemorrhage, rupture, or traumatism, and instanced the indications for the operation which, in his opinion, should include today nearly every case where the mother's life is jeopardized, or when the delivery of a living child is improbable.

Diagnosis and Treatment of Acute Pleurisy.

Edson B. Fowler. Etiological Diagnosis: Primary simple pleurisy, while induced by cold and exposure, is commonly considered to be due to an infection and is much more rare than the secondary type which arises from the extension of infection from neighboring tissues, more frequently by tuberculosis, pneumonia, pulmonary gangrene, hemorrhagic infarction, pulmonary embolic abscess and rarely, growths invading the pleura. To speak more broadly, since many of the foregoing affections of the lungs may develop in diverse diseases when of a severe type, it follows that pleurisy may be a complication of almost any disease. Of the secondary types, by far the most frequent is that arising from the tuberculous lung.

Pleurisy from sources outside of the lung is not uncommon, namely; from affections of the ribs from trauma or otherwise, vertebral caries, infection of the mediastinal glands, perforation of malignant growth of the oesophagus, pericarditis, rarely malignant growths of the kidney, peritonitis arising from abscess of the liver or stomach from perforating ulcer or otherwise, and acute suppurative pancreatitis with involvement of the lesser peritoneal cavity. Rarely also, pleurisy may arise from acute articular rheumatism and not infrequently it may be a late and even terminal complication of chronic Bright's disease, cirrhosis of the liver, cancer, heart disease, etc. The bacteriology is chiefly the *bacillus tuberculosis*, less frequently *pneumococcus*, *streptococcus*, *influenza bacillus*, etc., etc.

Course of the Disease: The onset of pleurisy may be sudden or gradual and sometimes there is a prodrome. Early there may be a chillness or a chill, moderate or even severe. Fever is present but as a rule not very high. Sputum in varying quantities is common and rarely there may be a little red blood mixed with it the first day or so. Pain, except in very young or old people is more or less severe. It is variously described as sharp, cutting or shooting. At first it may not be great but it gradually increases in intensity. Rarely, pain may be referred to the side opposite to the seat of the pleurisy. Cough is generally present and aggravates the pain as does laughing, crying, gaping, deep breathing, exertion, change of position or pressure over the affected area. The region most frequently painful is below the fourth rib and in the neighborhood of the axillary region although very frequently pain is near the nipple or the apex of the heart. More rarely it will be complained of in the epigastric, hypochondriac and upper lumbar regions or shooting into the shoulder. Respiration is accelerated and a varying degree of shortness of breath

soon appears and may later become severe dyspnoea. These patients feel dull, may be pale, have little or no appetite. Some may continue at their occupation until, in two or three weeks, weakness, dyspnoea and general malaise drive them to the physician who usually finds a large effusion. In favorable cases, the symptoms may disappear in a few weeks and the patient be symptomatically well. More severe ones may develop great dyspnoea and cyanosis with possible fatal termination. Others may become chronic and show thickening of the pleura and chest deformity, with or without pulmonary tuberculosis.

While the diagnosis is obvious in many cases and not infrequently correctly made by the patient there are many of an atypical type which are difficult. It is well to keep before us (1) the etiological factors as enumerated (2) the typical symptoms and (3) the clinical varieties (a) acute fibrinous (pleuritis sicca or plastic pleurisy) and (b) sero-fibrinous pleurisy (pleurisy with effusion.)

Examination of Patient. Inspection: In dry pleurisy, patient frequently lies upon the affected part or presses the hand, elbow, or pillow to the side at the same time bending the trunk toward the pleurisy to restrict as much as possible the pain. Respiration appears frequent, not dyspnoeic but shallow, often limited on the involved side or in the diaphragm. In the latter case, the respiratory excursion is largely thoracic and the diaphragm is more or less fixed; and with an effort to breathe diaphragmatically often there is, as full inspiration is approached, a wavy, shaking, halting action of the rectus muscle on the affected side (R. V. Stenitzer.) Also we have observed a little below the ribs a similar phenomenon in the other abdominal muscles of the affected side. Attacks simulating angina pectoris have been seen. (Andral.)

With a Moderate Effusion, there will probably be nothing striking in the attitude of the patient. The affected side often appears larger and is without noticeable expansion aside from a little in the upper thorax. In thin chests the interspaces may be partly obliterated, rarely entirely, except in children in whom there may be bulging. A visible apex beat may be displaced to right or left and, not infrequently is hidden under the sternum in left sided effusions. Occasionally, with each inspiration, is the shoulder of the side in question raised a little higher than its fellow. I am not prepared to deny or affirm that the rib interspaces are "invariably" narrowed on the effused side as stated by Przwalski who was able to demonstrate it most easily in children and at an early stage of the effusion. To outline the effusion to the eye, one will find of service the phonation test of Weisz in lean persons where there are no adhesions or reflex muscular rigidity. Upon pronouncing the explosives *b*, *p*, *k*, etc., the costal interspaces over all parts of the lungs will perceptibly bulge except where there is effusion the limits of which are thus made visible.

Palpation may reveal the friction rub though it is usually not felt with every respiratory

movement and but rarely with every inspiration and expiration. It is best recognized by the hand placed flat upon the chest with the fingers parallel to the ribs and resting in the interspaces. Usually very light pressure is most successful. Change of position of the patient or his elevating or lowering his shoulder in connection with respiration or a deeper than average breath may assist in detection of the rub which is not developed usually till the middle or very end of the inspiratory or expiratory act, that is, it lags very perceptibly. The friction vibration is greatest when the pleurisy is below the fourth rib and most likely to be found therefore when the inflammation lies below the level of the nipple. Pressure usually increases the rub and may elicit pain (a) at the place of pressure or (b) radiating below ribs in upper abdomen or (c) toward the nipple or (d) under the shoulder or (e) over the right or left phrenic in the neck or (f) at the attachment of the diaphragm or (g) through the liver when the right side, especially the diaphragm, is involved or (h) by the passage of ingesta through the oesophagus at the diaphragm or (i) just below the ribs.

In effusion there is more or less increased resistance and lessened elasticity of the side involved in proportion to the quantity of effusion. Above the effusion, if not very large the tactile fremitus will be exaggerated. When large, it will be almost entirely wanting; the heart apex if not under the sternum is felt displaced.

Percussion gives no abnormal notes until the effusion appears which will give an area of dullness corresponding to the confines of the effusion. The contour of the upper line of the effusion is the same for equal quantities of fluid. In small effusions the dullness is at the extreme base of the chest behind, the upper border is slightly convex and starting near the spine extends to the bottom of the pleural cavity near the mid axillary line. In looking for small effusions, we always compare the two sides, remembering that the left side is normally a little lower than the right. A medium effusion is horizontal behind, rises in a convex curve in axilla and falls toward the front of chest. In a large effusion its upper line corresponds roughly to the location of the second rib. Percussion shows respiratory excursions absent in medium or large effusions. Gerhardt thinks he can discover a small effusion earlier by putting the patient in the knee-chest position with moderate inclination of the body toward the affected side in which position the fluid gravitates toward the axillary region. We have not been able to verify Gerhardt's finding. A changing line of dullness can rarely be demonstrated except when a considerable time is given the effusion to adjust itself to a new position of the patient. When there are adhesions, sacculated effusion or thickened pleura, the aspirating needle is a great help. The heart may be displaced anywhere to the right as far as the right nipple line or to the left as far as the left axillary region, depending upon the quantity of the effusion and which side is involved. The apex does not move horizontally but describes to some extent the arc of a circle whose center

is the less movable base of the heart. The liver will be displaced downwards somewhat or Traube's space diminished respectively as there is a right or left sided effusion. Hyper-resonance or tympany is common just above the effusion. With the patient leaning forward and the muscles of the back somewhat tense, if the examiner places the left hand below the nipple, flat and rather firmly and percusses forcibly the ribs on the same side at the angle or a little posterior, there may be an increased vibration of the rib transmitted to the left hand if there is an effusion.

Auscultation of dry pleurisy in the beginning generally gives a friction rub over the seat of trouble not always synchronous with the respiratory movement but usually however in the last third of inspiration or expiration or, what is common, heard at the end of the respiratory act. The rub may be to and fro with each respiration but frequently is heard every second, third or fourth respiration either to and fro or, what in our experience occurs very often, only an audible rub one way and that may be either inspiratory or expiratory. The same manipulation of the patient for auscultation as for palpation is not infrequently valuable in hearing the rub. Over a medium effusion, respiratory tones are faint, distant or absent. Vocal fremitus is diminished or absent over the effusion except where there are adhesions, or an encapsulated effusion, or in children. Above the line of dullness, vocal fremitus is usually increased, bronchial breathing or aegophony, may be heard or a fine moist crepitation in the lower portion of the lung may be present on the affected side. The nature of the pleuritic effusion may be determined by its examination, grossly and microscopically. A blood tinged effusion speaks for tuberculosis or malignant growth involving the pleura. Microscopically the cystodiagnosis as used by Widal, Rivaut and Nawnyn and tested by Dieulafoy and others would appear fairly trustworthy. It is based on the principle that a liquid bathing the pleura tends to detach endothelial cells but if the pleura is covered with a false membrane, these cells will not reach the exudate. Also as the inflammation is severe, so will polynuclear leucocytes replace the lymphocytes in an exudate e. g., an effusion resulting from ineffective heart action contains endothelial cells and lymphocytes. Where acute inflammation exists, its tubercular or non-tubercular character is shown by the contents of the exudate. (1) Tubercular when lymphocytes and red blood cells are found. (2) Non-tubercular when chiefly made up of polynuclear leucocytes and some endothelial cells. As a corollary to the above, secondary forms of tuberculous pleurisy may contain polynuclear leucocytes derived from the focus in the lung causing the pleurisy. For examination with microscope, centrifuge and stain residue with thionine, eosine-hemateine and Ehrlich's triacid stains. The results obtained in this way are confirmed by histological examination and the injection of exudate in guinea pigs.

Differential Diagnosis. Dry pleurisy without cardinal symptoms and with severe initial chill (e. g. in pneumococcus infection) may simulate

closely beginning pneumonia. However the pneumonia has one or more of the following signs or symptoms (1) rusty, tenaceous sputum, (2) dull, heavy ache through the chest, most often under the sternum (3) fine, dry, crepitation in the beginning pneumonic area. With moderate effusion atypical signs occasionally confuse. There may be no demonstrable restriction of chest expansion, very slight or no tympany above or outside the line of dullness; in children tactile fremitus is often marked over the effusion and tubular breathing may be present. In such cases and also in massive pneumonia in which the bronchi are plugged with fibrin, the diagnosis may be impossible without the aid of the aspirating needle.

Little trouble will be experienced with thickened pleura. A history of previous pleuritis, relapses, delayed resolution, etc., will prepare one for the contracted chest, the relative dullness, restricted lung excursion and weak, obscure respiratory tones on the involved side.

Confusion of a left pleural with a large pericardial effusion has occurred. It can be usually avoided if we locate the heart apex and make sure that it is not displaced to the right.

Exclusion of an hydrothorax is made by its being associated with general dropsy, renal or cardiac, and the absence of pain, friction rub or fever. Besides, the fluid is clear, free from flocculi and contains a very little or no albumen. It is a non-inflammatory transudate.

Rarely there may be intercostal neuralgia associated with pleurisy. Dry pleurisy with no friction rub may be taken for intercostal neuralgia. There is no fever, however, in neuralgia. Pain on palpation is usually confined to the nerve trunks. By drawing the finger tip lightly along the lower costal border or on the ribs, sharp pains will be produced as nerves are compressed (1) near the vertebral column, (2) somewhere in the axillary region, (3) near the sternum, i. e., Vallix's points. Not infrequently is the pain asynchronous with respiration and it may be paroxysmal.

Differential of haemathorax can be made by a history of trauma, aneurism, infarct, phthisical cavity involving the pleura, scurvy or purpura and symptoms of sudden, severe hemorrhage and a rapid development of percussion flatness with no friction rub and no fever. Aspiration needle will rarely be needed.

Chylothorax, a very rare condition, can be excluded by the aspirating needle.

A recognition of new growths of the pleura before a pleurisy exists is rare. The tumor is almost always secondary to tumor of the lungs, of structures in the mediastinum or of the kidney, liver, mammary gland, sternum, ribs, etc., etc. A knowledge of the primary growth will usually make evident the nature of the pleural involvement. These growths and also hydatids, give extensive dullness with an absence of tactile fremitus and no breath sounds and so closely simulate effusion that the exploratory needle or X-Ray will frequently be necessary.

Treatment 1.—Prophylaxis. In so far as possible avoid the etiological factors especially cold and wet. 2. With patient in bed, enjoin absolute quiet. 3. Control the pain by strapping with adhesive plaster well beyond the af-

fected side, taking care to have the patient expel all the air possible before applying the strips of adhesive, or after forced expiration, encircle the chest with a bandage extending from the lower border of the lungs well above the seat of pleurisy. Or, we may use leeches, guaiacol, Paquelin cautery, mustard plasters, poultices, various linaments, heat or cold, tincture of iodine, etc., etc. Having obtained very satisfactory results with strapping or bandaging, we have had little clinical experience with the latter methods. Internally for pain, morphine hypodermatically, a Dover's powder or any one of many analgesics may be used. Calomel followed by a saline is routine treatment. Salicylates are of value in the rheumatic form of pleurisy. 4. The diet should be light and nutritious but not necessarily liquid. Restriction of fluids as well as mild, general depletion of body fluid before effusion has occurred would seem rational. 5. Rarely will the height of the fever indicate sponging. 6. When an effusion has developed and does not begin to diminish soon after the fever has subsided, or when a week after inception of the effusion, it does not diminish, counter irritation is usually considered. If the patient is strong, a more rigid limitation of liquids has advocates. The food should be nutritious but contain a relatively small quantity of fluid. Restriction of liquids and the use of cathartics is favored by some and much opposed by others. Diuretics have long been used. Digitalis may be of value when for any reason there is waning heart compensation. Hot or vapor baths or diaphoretics are likely to annoy and depress the patient besides making very little impression upon the effusion.

Aspiration should be employed, (1) When there is dyspnoea with cyanosis and an embarrassed heart. (2) When the effusion has developed rapidly and there is danger of sudden onset of the immediately foregoing symptoms. (3) When absorption of the effusion is delayed more than ten days or two weeks. (4) When reaccumulation of effusion has occurred. The chief dangers incident to aspiration to be guarded against by careful technique are in order of frequency of occurrence (1) pain and cough with disturbed circulation and possible syncope (2) pneumothorax (3) emphysema of the chest wall (4) pulmonary oedema (5) additional infection of the case with careless technique.

In this connection may be mentioned the treatment of serofibrinous pleurisy by aspiration and injection of a somewhat less volume of air. (Vaquez et Laubry, *Bulletins et memoires de la Societe medicale*, April 23d, 1903) into the pleural space. The advantage claimed for this procedure are (1) A more complete evacuation of the effusion is possible without producing pain, cough, dizziness, fainting, albuminous expectoration and a possible pulmonary oedema. (2) It seems to favor the non-recurrence of effusion possible by maintaining more nearly the pressure equilibrium within the pleural cavity. The compression of the lung is maintained and expansion and consequent parietal movements of the lungs are held in abeyance pending the general absorption of the air. Nitrogen is prob-

ably better for this purpose than air as it is less rapidly absorbed by the tissues. This treatment needs to be further tested before its proper place in the management of pleurisy will be known.

The after treatment of all pleurisies known or suspected to be tubercular is important. The diet, hygienic conditions, habits and not infrequently the occupation must be prescribed. A change of climate will often prevent the development later of more serious tuberculosis. High altitudes may aid in expanding the contracted lung. Much may be accomplished by systematic, deep inspiration followed by slow expiration. Daily blowing up a football bladder or the use of a blowing machine, swinging of light Indian clubs, light dumb bell exercises, etc., will go far towards restoring the crippled lung to its normal freedom of movement.

 * Military Tract Medical Association. *

Regular meetings are held annually in October at some city in the District which embraces that part of the State lying west of the Illinois River and known as the Military Tract. Membership 150.

Officers.

President H. L. Hopper, Galesburg
 First Vice Pres. W. S. Holliday, Monmouth
 Second Vice Pres. J. A. Kirkland, Cambridge
 Secretary and Treasurer...C. B. Horrell, Galesburg

At the annual meeting held Oct. 15 and 16 at Peoria, S. C. Stremmel of Macomb read a paper on *Hospitals in the Smaller Cities*.

Not long since hospitals were seldom seen outside of the larger cities, but within the last decade, they have sprung up, like magic, all over the United States, and it seems reasonable to predict that within the next few years there will be few cities with a population of 5,000 or above that will not have a hospital. As the medical profession, in the smaller cities advances to the point where it appreciates hospital facilities and advantages and becomes competent to manage hospital cases, just so soon, as a rule, the hospital will be built, provided there is some one in the community, who is capable of getting the subject before the public in such a way that it can clearly see the necessity of one. The chief difficulty experienced by almost every community desiring to build a hospital, is to raise the necessary money. It takes from 15 to 20 thousand dollars to build and equip a 20 bed hospital with modern conveniences essential to do good work, if careful economy is used. The money can often be secured by donations from charitably inclined people with means if they can be made to understand the work done by a well conducted institution of this kind. When it is impossible to get the money in this way, it may be gotten by subscription. This, of course, requires usually a great deal of time, perseverance and hard work and, in many instances has resulted in failure. Occasionally hospitals are built, in a small city, by one or more doctors, as a business enterprise, but men who have sufficient means to build a hospital are seldom so short sighted as to invest their money this

way without a careful investigation as to the expenses of maintaining a hospital, consequently they do not invest. When a hospital is once built, the proposition before the community is how to make it a success. The success of these hospitals depends upon the following important points: 1st. The kind of work done. 2d. The co-operation of the better element of the profession and 3d, proper management.

Kind of work done: Nothing succeeds like success. Whenever a patient goes to a hospital and returns to his home with health restored, it is a standing advertisement for the institution for years to come, while if he is no better or is worse, it is a serious blow. Yet the people all over the country are rapidly becoming educated to hospital work and will soon forgive our short comings here as readily as they do in their homes. It frequently happens that physicians in their anxiety to get cases in and to have the hospital full, run in all kinds of incurable cases and cases that are not legitimately hospital cases. Such work is bound to reflect discredit on the institution. Of course it is necessary to take many cases to the hospital for care and treatment, that are incurable, but in such cases the family should clearly understand the probabilities of the result of treatment and not be given unreasonable promises, simply to get the cases in. The strong lever to the success of a country hospital is good surgery, consequently the man or men who do the surgery should be thoroughly qualified for the work. Even if a great many cases are well treated, a few unfortunate ones improperly treated, will cripple the institution. It takes a better surgeon to do surgery for any length of time in a small city than it does in the large hospitals of our large cities, because the entire community upon which he is depending for his cases, knows all about his work, while in the cities very few ever know anything about it. A serious trouble in many places, is that as soon as the hospital is built, everybody wants to do surgery, as a result the work is so divided that no one ever becomes proficient, consequently there are hospitals today which have no surgeon worthy the name, and communities that get poor surgical service. When the institution is opened this point should be considered and one man appointed to do all the surgery, except minor cases, and he should have his regular and trained assistants in all heavy operations. I am aware that this is often difficult to do, but it is essential to good service. It is a well-known fact that quite generally throughout the country a majority of the patients will let any doctor do any kind of an operation on them without inquiry into his ability for that kind of work, consequently they are often operated on by the totally inexperienced. This does not imply that anyone should be barred from satisfying his ambition to be a surgeon but it does imply that no one should do surgery without first thoroughly fitting himself for it. With the modern post-graduate facilities, there is no excuse for amateur work and no hospital should permit anyone to operate who has not had the proper training beforehand. The hos-

pital should have its regular anaesthetiser, one who takes interest in it, makes it a study and is competent to administer the anaesthetic skillfully. Many patients have died from ether and chloroform anaesthesia, consequently this is a most important position and should be well understood. A good microscope and a good man to handle it is a necessary part of the armamentarium of every hospital. Urine, blood and pathological examinations should be made of every case as a routine practice. If this is neglected, serious and often fatal mistakes will be made.

Co-operation of physicians;—an important factor to the success of the hospital is the co-operation and support of all or a majority of the physicians of the community. It is gratifying, indeed, to see physicians, who, in days gone by, were barely on speaking terms, unite and work shoulder to shoulder to maintain the hospitals and strive to improve along the lines of modern hospital treatment. These usually comprise the better element of physicians. Then there are those in almost every community who do all they can against the hospital. They are the men never seen at a medical society and sink into professional isolation which leads them into the old rut of mossbackism. Fortunately, their influence is not much but it is some. When they hold a case that needs operation they send to a distance for a surgeon and have him operate in the patient's home, explaining to the patient that it is not necessary to go to a hospital at all. People who do not know the difference between home and hospital operating are quite ready to stay at home so that all the folks can be right there in the way. Quite a number of patients are kept away from the hospital in this way and when the patient insists on going to the hospital in spite of advice to the contrary, the doctor precedes him with a request for a good portion of the fee for his influence in bringing him in. It is the duty of every surgeon to refuse to operate on any case under such circumstances, unless it is an emergency case and cannot be removed to the hospital safely. If he does not he is guilty of conduct unbecoming to his profession.

The management: The management of the country hospital should be either in the hands of one of the nursing organizations, such as the Deaconesses or Catholic Sisters, a single individual as trustee, or the city. It should never be in the hands of a board of lady managers or a church, because, as a rule, not one of them know a thing about running one or what its needs and best interests are. The various nursing organizations have certainly done a great work in this line and deserve the greatest praise and admiration of the general public, wherever they are working. The great trouble is there are not one-half enough of them. They are refusing daily to take charge of institutions after institutions, which are offered to them with all the indebtedness paid and a clear title to all the property and appliances, but they can not take them because they have not women enough who are competent to take charge of them. When the management is totally in the hands of one

man, it is alright, provided he is liberal minded enough to see that every doctor connected with the hospital gets fair and impartial treatment and guards jealously the service of the institution to patients and understands thoroughly all the detail work. Where the hospital is in the hands of a board of trustees of citizens or doctors, the general management should be left in the hands of the superintendent. A trouble often encountered, where the hospital is in charge of the city, is that after each election, there is a change in the staff. The staff should be permanent and each member should hold his position as long as he is competent to fill it, regardless of political or wire pulling influence. The management being settled, a most important point is to secure an able superintendent. Upon her rests a great portion of the responsibility for the success of the institution. Her position is a most difficult one to fill and she deserves more credit and compensation than she ever gets, if she does her work well. In the large hospitals of the cities everything is run on a strictly business principle. Most all of the patients are strangers and know nothing much about hospitals, they are known only by number and if they are put anywhere and treated any way, it doesn't make any difference, the hospitals keep full just the same. While in the smaller cities, it is very different. Most every patient stands in the relation of a personal acquaintance as it were, he is at home among his friends. He knows everything that is going on and when he gets out he tells everybody what kind of treatment he gets, while at the hospital. If the operation is a perfect success in every way and he is restored to health he is satisfied. If he fails to get the many necessary attentions and courtesies, he will often go out and call it a bum place to stay. Besides attending to these matters, the superintendent is expected to do the housekeeping, oversee the kitchen, the laundry, the janitor's work, the maid's, carry on class work of her pupil nurses, instruct and look after their work with patients, take charge of the operating room, and see and keep the books and have her accounts all straight, also do the shopping and innumerable other things. For all these services she usually gets from \$40 to \$50 a month. A superintendent who is capable of doing all this work and doing it well, earns and should be paid from \$75 to \$100 a month. Many who have shown themselves competent are getting such salaries and it has been shown that they save more than half their salary for the hospital.

Last but not least, I wish to say a word with regard to expenses. It is these that make it difficult to keep the hospital accounts on the right side of the ledger. It costs \$600 a month the year round to run a 20 bed hospital if economy is practiced. This includes salaries, provisions of all kind, gas, water, fuel, medicine, surgical dressings, repairs, etc., everything complete. Some months the expenses will be much less but with the most careful economy at the end of the year, it will figure up, nearly to the average. If the hospital is full all the time it will take from six to nine hundred dollars a month. It has been said that the hospi-

Rowland, J. Weir, Haslet, Rynerson, Wilhoit, Wilkins and Prewett.

On motion and second the Secretary was instructed to have a number of copies of the constitution and by-laws printed and mail a copy with invitation to become a member, to each doctor in the county, legally qualified to practice medicine, and everyone answering favorably (stating his willingness to subscribe to same) shall after approval of board of censors be listed as a charter member, list to be forwarded and charter applied for from State Society in about a month.

Society adjourned all feeling that violators of the moral law in Clark County would be managed better as a result of this meeting.

Warren County Medical Society.

Regular meetings are held in Monmouth the first Tuesday of May and October. Membership 15.

Officers.

President A. G. Patton, Monmouth
Vice President J. M. McClanahan, Kirkwood
Second Vice President H. A. Foster, Gerlaw
Secretary and Treasurer.....E. J. Blair, Monmouth

The Warren County Medical Society met in the Court House, Monmouth, Ill., Oct. 6th, was called to order by the President, W. S. Holliday, there was a fair representation of the doctors of the County present. The Committee which had been appointed on Constitution and By-Laws, was given full power to act on same as recommended by the A. M. A.

Drs. Wallace, Skinner and McClanahan were appointed the Board of Censors, David A. White, Little, York, Ill., and J. J. Allen, Kirkwood, Ill., were received as members of the Society.

J. F. Percy, Galesburg, Ill., represented the State Society in a very interesting and forceful way.

F. E. Wallace read a timely paper on **Medical Ethics**. H. S. Zimmerman, Cameron, Ill., read a paper entitled **Osteopathy—What is it?** This paper was characterized for its originality and fairness.

J. M. McClanahan, Kirkwood, Ill., reported a very interesting case of **Paraplegia** also a similar case by J. W. Standley, Alexis, a very helpful discussion followed, in which all of the doctors present participated.

A communication was presented from Charles A. L. Reed, Chairman of the Committee on Medical Legislation of the A. M. A. to the effect that E. J. Blair, Monmouth, Ill., had been appointed a member of said committee to represent Warren County, the doctors of the County will confer a favor by reporting any matter which might be of interest to the Legislative Committee to him.

The following officers were elected for the ensuing year: A. G. Patton, Monmouth, president; J. M. McClanahan, Kirkwood, and H. A. Foster, Gerlaw, vice-presidents, and E. J. Blair, Monmouth, secretary and treasurer.

After a very enjoyable banquet at the Presbyterian church the Society adjourned.

Vermilion County Medical Society.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8.30 p. m. Membership 40.

Officers.

President Jos. Fairhall, Danville
Vice President F. N. Cloyd, Westville
Sec'y and Treas. E. E. Clark, Danville
Board of Censors: H. F. Becker, E. A. Johnston, W. A. Cochran.
Committee on Violations of the Medical Practice Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

The December meeting was held at the City Hall, December 14th. The meeting was called to order by the President, Joseph Fairhall.

The Secretary's report was read by E. A. Johnston, E. E. Clark being absent.

R. A. Brown, Humerick, Ill., applied for a membership.

President's inaugural address by Joseph Fairhall. A very creditable address, in which he reviewed the history of the Society, commended its faithful members, recommended opposing drug houses sampling their goods from house to house, a revision of the Society's by-laws, greater care in the work of the Board of Censors, and that the Society make early arrangements for the entertainment of the Aesculapian Society, which is to meet with us in May.

The paper of the evening was on **Epilepsy**, by M. S. Fletcher. An able paper treated of Epilepsy as being due to an explosion of the nerve centers and especially recommended governing and training a child as a prophylaxis.

The discussion was led by J. M. Guy and participated in by all the members present.

Cases reported: O. W. Michael, **Scurvy**, with its attending sore mouth and very enlarged spleen and Purpura hemorrhage; patient died in two weeks. Patient a miner, and supposedly large amounts of salt meat the cause. E. M. Smith, **Septicaemia, following child birth**, woman who was attended by a licensed midwife, but no asepsis were used.

Society adjourned. E. A. Johnston, Secretary, pro tem.

Logan County Medical Society.

Regular meetings are held the fourth Thursday of January, April, July and October. Membership 13.

Officers.

President J. L. Lowrie, Lincoln
First Vice Pres. L. F. Curtis, Elkhart
Second Vice Pres. Maskel Lee, Atlanta
Secretary H. S. Oyler, Lincoln
Treasurer W. H. Kirby, Chestnut

The Society was organized on the 29th of October, and officers elected. Committees were appointed to change the constitution of the American Medical Association, recommended to suit conditions of Logan county and to select time and place of meeting.

The second meeting was held December 3d, at which time the constitution was adopted. The Society will meet quarterly in Lincoln, the annual meeting being the 4th Thursday in April. We have a membership of 13 at present.

 Sangamon County Medical Society.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m.
 Membership 73.

Officers.

President B. B. Griffith, Springfield
 Vice President S. E. Munson, Springfield
 Secretary-Treasurer C. P. Colby, Springfield
 Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The Sangamon County Medical Society held an exceptionally well attended monthly meeting on Monday, December 14, 1903, at 8:30 p. m., in the supervisor's room at the Court House, with President B. B. Griffith in the chair.

Minutes of last meeting read and approved.

The Board of Directors asked for more time before acting upon the report of retiring Secretary-Treasurer.

Bills of Edw. F. Hartman Co., \$2.85; Secretary, \$1.00, were read and ordered paid.

The application of H. H. Tuttle was read and referred to the Board.

The business part of the meeting being finished, Hon. James M. Graham, read a very interesting and instructive paper on **Medical Jurisprudence**. A unanimous vote of thanks was extended to Mr. Graham.

Dr. Kreider reported a case of **Appendicitis with Symptoms Simulating Sciatica**, also a case of virulent **Septicaemia** in one of our profession, following a slight cut of the hand.

D. A. L. Brittin reported a case of probable **Ectopic Gestation** of six months duration with uterus much smaller than would naturally be expected from the duration of pregnancy, also with metrorrhagia, paroxysms of excruciating pain, and discharge of pieces of decidual membrane.

Dr. Egan reported an interesting case of **Varicella Closely Resembling Variola** in an adult.

Dr. Walters a case of **Albuminuria**.

Adjourned.

Charles P. Colby, Official Reporter.

 Tri-County Medical Society.

This Society embraces the counties of Iroquois, Ford and Vermilion. Regular meetings are held in the counties in rotation on the first Tuesday of June and Dec. Membership 50.

Officers.

President F. M. Mason, Rossville
 Secretary-Treasurer Leroy Jones, Hoopeston
 Censors: Mary B. Newell, Onarga; T. N. Bone, Loda; D. W. Miller, Gilman.

Our Tri-County Medical Society met December 1st, in Watseka, with doctors from the three counties of Iroquois, Vermilion and Ford. The attendance was light but the meeting one of the best.

Drs. Shaw, of Martinton and Smith, of Watseka, were elected members. Dr. C. B. Johnson, member of Illinois State Board of Health was present and made a good address on **Diagnosis of Smallpox**. Drs. Johnson, of Danville and Leemley, of Watseka read fine papers on **Rheu-**

matism. A committee was appointed to submit a revised Fee Bill at the next meeting. The society meets again June 7th, at Hoopeston.

Leroy Jones, Official Reporter.

 Effingham County Medical Society.

This society was organized in December, and will hold a regular meeting Tuesday, January 12, 1904, at Effingham.

 Putnam County Medical Society.

This society was recently organized by Councilor W. O. Ensign, but no report has been sent us. Putnam county is the smallest county in the State and has only six licensed practitioners. If this small county can be organized every county in the State can be.

Changes of Address in Chicago.

Ainsworth, H. H., 304 Warren ave. to Academy of Music.
 Besley, F. A., 6027 Prairie ave. to 1070 W. 63d st.
 Burcky, W. E., 6641 Halsted st. to 3611 Grand Boul.
 Eskridge, B. C., 4166 Halsted st. to 4363 Emerald ave.
 Hamisfer, Florence N., 330 La Salle ave. to 281 Oak st.
 Olsen, Maria, 34 Washington st. to 520 Dearborn ave.
 Rawlings, I. D., 92 State st. to 35th and Lawndale ave.
 Sammons, E. H., 3112 So. Park ave. to 3104 Cottage Grove ave.
 Stevenson, Alex. F., 398 La Salle st. to 475 Dearborn ave.
 Wall, C. D., 339 So. Lincoln st. to 636 W. 14th st.
 Warner, A. L., 1315 Venetian Bldg. to 448 N. Clark st.
 Wells, J. L., 267 Michigan ave. to New Southern Hotel.
 Willard, Wm. G., 544 to 1104 Washington Boul.

Changes to Chicago.

Norris, A. L., from Farmer City to 5002 Washington ave.

From Chicago.

Holsteen, Willis F., 718 Halsted st. to Santa Rosalia, Mexico.

In Illinois.

Barto, F. C., Plainview to ———.
 Hagarty, Thos., Wayne City to East St. Louis.
 Perdue, Finis, Lyndon to Rock Island.
 Shurtz, S. W., Mahomet to Champaign.
 Sorby, E. A., Mokena to Oak Park.

From Illinois.

Burwell, Enoch A., Decatur to Hobart, Okla. Ty.
 Davis, W. Hope, Springfield to San Antonio, Tex.
 Horn, W. L., Arrowsmith to Boulder, Colo.
 Rosenberger, P. A., Petersburg to Oklahoma Ty.

The Illinois Medical Journal.

*Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.
Membership, 1519.*

OFFICERS:

R. B. PREBLE, 103 State Street.....	President
FRANK X. WALLS, 4307 Ellis Avenue.....	Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....	Treasurer
W. A. EVANS, 103 State Street.	Chairman Medicolegal Committee
WM. HARSHA, 103 State Street.....	Chairman Membership Committee

JANUARY, 1903.

A regular meeting was held Nov. 25, with President R. B. Preble in the chair. A paper was read by Dr. Churchill, entitled:

Bone Changes in Rachitis.

Frank Spooner Churchill, Ex-instructor in Pediatrics Rush Medical School (University of Chicago). Rachitis, or rickets is a disease of nutrition, affecting all tissues of the body, and having its most manifest effects in the bones. I do not wish however to be understood as meaning that rachitis is a disease of the bones per se. This is far too prevalent a view of the condition and leads to mistake in diagnosis, or rather to a late diagnosis. For the physician who has this conception of rickets will be looking for the characteristic bone changes, and not till they appear will he detect the true nature of the malady. Rachitis in reality is a species of starvation, beginning insidiously and manifesting its presence by well defined symptoms, as a rule long before any bone changes are evident; for the latter appear comparatively late in the disease. Chief among these symptoms are head sweating, restless sleep, and constipation. This tri-pod of symptoms in an infant should lead at once to an inquiry into the feeding, whether the infant be on the breast, or on a substitute food; which investigation will almost invariably show a faulty diet; that is, a food not containing in proper proportions the elements necessary to proper growth. The natural result is defective nutrition all along the line and in this malnutrition the general osseous system of course suffers along with the rest of the body. It is however, only one phase of the disease, not the disease itself.

To a clear understanding of the pathological conditions found in rachitic bone, a brief statement of the growth of normal bone is necessary. Bone is originally formed by a process termed ossification, beginning in most cases in cartilage, the part formed from the primary center being known as the diaphysis that from the secondary center, as the epiphysis.

This process begins as early as the sixth week in fetal life, is well established at birth, proceeds rapidly during the first years of life, then more slowly, and is finally completed with union of diaphysis and epiphysis in early adult life.

The process e. g., in a long bone is as follows: The cartilaginous cells in the center of the bone become enlarged, separated from each other, and arranged in columns above and below the center. Thus an increased amount of space is left between the cells, and in the intercellular matrix thus left is deposited a calcareous substance. This deposition of calcareous material goes on in both directions, pushing out towards the end of the bone. Co-incidentally with this deposition of calcareous matrix, there occurs a thickening of the layer of cells just beneath the periosteum forming a vascular membrane, rich in osteoblasts the agency through which true bone is ultimately formed. This osteoblastic layer next penetrates the intercellular cartilage matrix, absorbs it, and following closely on behind, but with a clearly defined space between the two tissues, itself pushes on toward the end of the shaft.

Section of a normal bone shows the zone of proliferation clearly defined between the end of the shaft, and the still cartilaginous epiphysis. Microscopically is seen the appearance already described of cartilaginous cells, arranged in columns, and close behind the advancing bone. The line between the cartilage and bone is sharp and well defined.

Now in rachitis we see striking departures from the normal in the appearance and structure of bone, both macroscopically, and microscopically. These changes are found widely distributed, but most frequently in the long bones and especially in the epiphysis. The processes already described in the growth of normal bone, cartilage production, and bone production, still go on of course in rachitic bone, but in disturbed relations, cartilage production being excessive, ossification deficient. The result is, speaking generally, a bone deficient in lime-salts, thickened, and flexible; and upon these characteristics depend the deformities seen in rickets. Over cartilaginous production causes thickness: hence the "bosses" seen on the skull, the "rachitic rosary," the broadening of wrists and ankles. Deficient ossification makes the bone softer, and therefore more easily bent when exposed, to the pressure of bodily weight and muscular action: hence the deformi-

ties of spinal column and pelvis, the curvature of fore arm, thigh and leg, the green-stick fractures. As the long bones increase in length by ossification at the junction of the epiphysis and diaphysis, we also see shortening of the limbs, due to failure of this process, producing a dwarfed effect.

On section of a rachitic long bone, the principal change is seen at the ends, where the cartilage layer uniting shaft and epiphysis is seen to be much thickened and broadened, with irregular and ill defined edges, unlike the narrow well defined line of the normal bone. This cartilage area is of a bluish color, is softer than normal, and the calcified spots are irregular and scattered. In the shaft, the outer layers of the bone are thickened and soft, the inner layers more thoroughly ossified, the medullary canal more vascular and resembling granulation tissue. Microscopically the cartilage cells in the zone of proliferation are found to be piled up on each other, not arranged in regular columns. The line between cartilage and advancing bone is irregular, and not well defined. Islets of bone are seen in epiphyseal cartilage, and parts which should be completely ossified, are still cartilaginous. There is also a great increase in the number and size of blood vessels. In the shaft are seen more or less thickening and increased vascularity of the periosteum. Instead of hard compact bone are seen irregular spongy masses.

After a variable length of time, from three to eighteen months, the active proliferation in cartilage and periosteum ceases and is gradually replaced by ossification. Condensation and retraction often occur in the spongy masses of bone, and the ultimate result is sometimes an ivory-like structure harder than normal bone, a condition noticed by surgeons operating upon patients who have suffered from rickets in early life.

While the most striking changes in the osseous system are seen in the long bones, the earliest changes are seen at the junction of the ribs and costal cartilages where are found the beads or rachitic "rosary." These beads have been found on still-born children, throughout infancy and early childhood, but rarely after five years of age. They occur more frequently on the lower ribs, and are more marked on the pleural than on the external surface. They vary in size from slight thickening detected only on careful examination up to a mass the size of a cherry.

Another frequent and often marked deformity of the thorax, is a groove extending from the junction of the body of the sternum with the ensiform outward to the posterior axillary border, the so called Harrison-sulcus.

The skull usually presents marked changes occurring sometimes before the beading of the ribs. The edges of the flat bones are unduly soft, the body of the bone yields to pressure like parchment, spots of local thinning are detected, the whole condition being known as "craniotabes." The "bosses" have already been mentioned. They are seen on the frontal and parietal bones, giving the well known square appearance to the head. The persistence of an

open anterior fontanel is another sign of almost constant occurrence, and is due of course to deficient ossification.

Less frequent than the changes in long bones, ribs, and skull, are those found in the spinal column. The most common deformity here is a rounding convexity, to be distinguished from the sharp knuckle-like kyphosis of caries of the spine. Lateral curvatures also occur. Vertical section of a vertebra shows a bluish proliferation zone between the disk and the body, also that the body cuts very easily being softer, more vascular, and of looser texture than in health.

Finally must be mentioned changes in the pelvic bones which may be extensive enough to be of prime obstetrical importance.

These various changes occur, rarely during fetal life, frequently during the first two years of extra-uterine life, periods at which growth of bone is most active. In the case of fetal rickets, care must be taken to distinguish between this condition and chondrodystrophy fetalis. The macroscopic appearances in the latter are very similar to rachitic changes: there are shortening and curving of the long bones, thickening of the extremities. But microscopically there is a great difference in the two conditions: the enlargement at the ends of the long bones being due in rickets to overgrowth of the epiphyseal cartilage, in chondrodystrophy to periosteal thickening; furthermore, the zone of proliferation in the latter is narrower than normal.

As to the exact cause of the bone changes in rachitis, we are still in the dark. While the disease as a whole is due to faulty nutrition, all of the steps by which the pathological condition is produced are by no means determined. In the vast majority, if not in all cases, the diet is at fault; and the most frequent factor in this direction is deficiency of fat, whether the infant be on the breast or on a substitute food: hence the frequency of the condition among the infants of the poor fed either on a poor breast-milk, or on improperly modified cow's milk, and its rarity among the children of the more well-to-do, fed on either a good breast-milk or a properly modified cow's milk.

The development of rachitis is preventable, except among the extremely poor. Given a normal new-born infant with a fairly intelligent mother, the physician can correct the first signs of mal-nutrition, and by intelligent methods of feeding insure proper growth and development. But he must be keenly watchful for the first disturbances of nutrition, and then take vigorous action along dietary lines. Progress from the first slight symptoms to changes in the bones should be to him a matter of shame.

Dr. Charles B. Reed read a paper on **Osteomalacia**.

Osteomalacia.

C. B. Reed: The subject of diseases of the bones in connection with pregnancy includes a very extensive list of conditions which complicate and interrupt the physiological course of gestation and labor. We see for instance, the effects of Rhachitis, Coxitis, osteomalacia,

tuberculosis of the vertebra, exostoses and spondylolisthesis producing a series of characteristic deformities of the bony pelvis, while fragilitas ossium and arthritis together with relaxation or ossification of the pelvic articulations furnish further complications of a more or less serious nature during pregnancy and require in a large degree artificial assistance in the labor.

Osteomalacia may be briefly described as a chronic inflammatory disease of the bones whereby they become soft and yielding, or brittle and in consequence experience many changes in shape from the various forces which act upon them.

In contradistinction to rickets, which it resembles in many respects osteomalacia is found with very few exceptions in adults, and while not entirely limited to females, it may be said that the disease usually occurs in pregnant women of 30 to 35 years of age, who have already been confined at least once, and apparently the more frequent the labors and the closer the succession, the greater is the liability to the disease. It is pre-eminently a disease of the preg. multipara. It is rarely observed in the United States, only a few cases having been reported up to five years ago, but in Europe and particularly in certain localities, the disease may be said to be endemic although in localities of most frequent occurrence, the cases vary with the years and at times disappear altogether. Thus in France and Hungary it is very rare while in parts of Switzerland and Italy it is not at all uncommon.

Clinical History: The invasion is usually signaled by sharp pains which may occur in any part of the body and may affect either bone or muscle. The pains are rheumatoid in character, and exhibit a marked predilection for ribs, cervical vertebra, sternum and the bones and muscles of the pelvic region, especially the symphysis, the pubic rami and the tubera Ischii as well as the ileo-psoas, the levator ani and the adductors.

These pains are more marked when motion is attempted and following the resulting inactivity, atrophy and occasionally paresis is found. Contractures are numerous and the Deltoid, the muscles of the lower extremities, or even the uterus may atrophy, the latter even may rupture in consequence, as in the case Ludwig reported.

The process in the muscles is marked by nuclear destruction and fatty degeneration. The paresis and muscular atrophy occasionally precedes the pain.

These phenomena will usually first appear in a multipara, subside after the labor, increase in severity with the next pregnancy while each successive labor becomes more difficult. Pronounced cachexia, anaemia, and lessened alkalinity of the blood mark the advance of the disease, while the urine and the milk excrete an increased amount of phosphates. The teeth may fall out, and the bones may soften until they may be easily cut as after artificial decalcification. It has been stated that the bones attain a rubber like consistency in advanced cases which permits the wings of the

illia to be pushed back against the vertebra and the ubera ischii to be compressed until the pelvic outlet is closed. The symphysis forms a beak, the coccyx is bent forward at an acute angle, the illium is crumpled up and in reality the pelvis collapses. The ribs sink down until they rest upon the pelvis and the patient looses from six to eighteen inches in height. The relations of the trochanters to the pelvis are so changed that the hips must be swung through a large arc to place one foot ahead of the other. This pelvic deformity is of course due to the traction and countertraction of the various muscles upon the softened bone, the body weight, and the opposing femora, while a definite importance must be attributed to the gravid uterus which becomes more effective, the later in the pregnancy the attack occurs.

Etiology: A number of factors seem to predispose to this disease, or at least it seems to be associated very frequently with damp dwellings, inferior food, unsanitary surroundings and swampy soils.

Among the diseases which have been found in connection with it are mentioned malaria, cretinism and struma. In regard to the changes which are actually present in the bones, such as the absence of lime salts, porosity and softening, there seems to be no dispute but on the significance of these histological findings there are two opposing views:

1st. That the deficiency of lime in the bones is the result of decalcification of already formed bone.

2d. That it results from the deposit of new osteoid tissue.

Each theory has its vigorous defenders and the basic facts in each case are so harmonious that it makes it far easier to accept the plausible solution given by Fellmer that both are right—that in the advanced stages of the disease there not only occurs a loss of old tissue, but also a definite deposit of osteoid tissue as in rickets between which and osteomalacia Ziegler has demonstrated a pronounced similarity.

This resemblance between rickets and osteomalacia is still further demonstrated by the occurrence in Fellmer's case of senile osteomalacia of almond sized protrusions at the sternal borders of the 7th and 8th ribs.

Morpurgo was also struck by this parallelism between the two diseases and finding osteomalacia quite common in his experimental colony of white rats, he succeeded in isolating a diplococcus which when injected into old rats produced an osteomalacia and in young rats a disease resulting in rickets.

It is very probable therefore as Ziegler shows that the decalcification of old bone with the deposit of osteoid tissue occurs simultaneously in both diseases and the degree of each may vary with the stage of the disease and the age of the patient.

But what causes this change, the actuality of which is so well demonstrated?

The use of water and food poor in calcium salts has been discredited as a factor.

The discovery of a bacillus by Winogradsky

which had the faculty of stimulating Nitrification has figured largely in the so-called nitrification theory, but this also may be laid aside to await further proof. This theory is founded upon the presence of the above micro-organisms, upon the occurrence of nitrous acid in the urine and upon the favorable influence of phosphorus which reduces the process of oxidation in the organism and the favorable influence of chloroform which has the effect of destroying the nitritic ferment.

Unfortunately the bacteriological and chemical findings have not been confirmed by others, the influence of phosphorus may be explained in other ways and it is hard to understand how the use of chloroform in connection with the organisms said to be found in the uterus and vagina, would so act as to prevent their increase in the vascular system.

The theory which seems to stand the practical test most satisfactorily was promulgated by Fehling and was stated by him as a trophoneurosis of the bones due to conditions of the vaso motor vessels of the osseous system which resulted reflexly from an irritation of the ovaries.

The many workers on this theory have found only one constant anatomical change in the more or less pronounced hyaline degeneration of the vessels and hyaline masses in the stroma, although to be sure investigations on the ovaries in the initial stages of the disease are lacking.

In consonance with this must be mentioned the theory advocated by Fellmer. He believes that under normal conditions the maternal organism supplies the phosphates and lime salts which are essential for the building up of the child's body. If there is a more pronounced destruction of lime and the phosphates, a part of the surplus will be excreted and a part will be deposited in different parts of the body as for instance on the under surface of the skull as osteophytes.

If the supply is not sufficient or the demand abnormally large, the body itself is called upon to supply the necessity as in conditions of inanition.

If the theory were true it would be found in conditions other than osteomalacia, hence it is important that in non-osteomalacic pregnant women, Schrader found in the 2d half of the pregnancy at least a third who were affected with pain on walking, great sensitiveness of the bones in general and of the small pelvis in particular and especially of the inner surfaces thereof.

The pain seemed greatest in the horizontal rami of the pubes, in the ilium and at the junction of the ascending rami of the ischii with the descending rami of the pubes.

If, now, the supply of lime and phosphates is too small or the excretion too great as a result of the increased secretion of the ovaries or if in consequence of too frequent pregnancies, the organism does not have the time to create in the proper way and in physiological amounts the appropriate chemical production, or if in consequence of too prolonged lactation

there is an abnormal excretion of lime, the physiological interchange of lime salts becomes pathological. That such Physiological interchange of lime salts is continually present is shown by the many examinations of the excretions as well as the presence of marrow elements in the blood as Tschistowitsch showed. That not only the increased excretion or the diminished intake but before all the needs of the child produce the disease is shown by the fact that the disease is nearly always found in multiparae, and secondly the bones of the child are only very exceptionally affected by the disease, only one such case being found in literature.

As Fellmer says the osteomalacia of pregnancy is really only an abnormal increase of the physiological interchange of phosphates and lime salts in pregnancy.

It is a well known fact that fractures during pregnancy take much longer time to secure firm union than outside the pregnant state. The senile osteomalacia is also easily explained by this theory as an exhaustion of the lime of the body from frequent pregnancies, closely following one another and the continuation of the unusually large ovarian secretions as well as an inability to assimilate perfectly the foods containing lime salts, hence the system cannot make up the loss.

I personally believe that the etiology of the calcific changes in osteomalacia and rickets will be traced ultimately to a common or very similar source.

Diagnosis: In well marked cases there can be no doubt of the diagnosis but some care must be taken to avoid confusion with other pelvic deformities which present similar characteristics, such as the kyphotic, the Robert, the pseudo-osteomalacia, cancerous and fractured pelvis. Among the early signs will be found contraction of the conjugate which in connection with the deep pelvic recess is characteristic.

Other early signs are the contraction of the transverse diameter of the outlet, and a shortening of the inter trochanteric distance. A history of severe rheumatoid pains which increase in severity with each pregnancy is important. The marked pain, the difficult locomotion the decrease in height in connection with pelvic changes which make each successive labor more difficult, all combine to produce a definite and unmistakable complex of symptoms.

Therapy: Acting on the theory of the ovarian origin of the disease Senator, Latzko, Schintzler, Bernstein and Fellner have given ovarian tablets to eight cases in all, without results. Spontaneous recovery has occurred in some cases. There are however only two methods of treatment which may be considered curative and worthy of serious attention at present.

The first is the administration of phosphorus which in 59 cases reported gave 33 cures and 26 improvements, and only in occasional instances does entire failure result. The objection to phosphorus is that of time, from twelve

to eighteen months being required to get results and it may then fail.

Castration with emptying of the uterus gives excellent results. Out of 100 cases, 86 were cured, 4 improved, 7 died and 3 remained unaffected.

Although the majority of cases have phosphorus in addition to castration, the latter exercises by far the most potent influence over the disease. The recovery begins usually within 24 hours and is absolute, by which is meant that cases observed from one to eight years show no signs of recurrence. The process in the bones is somewhat longer delayed than the subjective recovery, but in them too the cure is complete and in a certain degree the normal size and shape are restored, at least measurements of the pelvis are larger when the cure is complete than during the disease.

The obstetrical management presents some interesting phases, for instance under narcosis the flexibility of the bones may be such that many labors are possible that could not be considered if the pelvis possessed its usual rigidity. Thus in a c. diag. 7.5 cm. a nine months child was spontaneously born.

The greatest difficulty is at the pelvic outlet, which may be easily understood by observing the positions of the coccyx and sacrum, and tubera ischii. Attacks occurring during pregnancy should be treated by phosphorus, rest in bed and stimulating food until near the end of the pregnancy when C. sect. with removal of the ovaries will save the child and in a majority of cases (90 per cent.) prevent recurrence. In pelvis in which the bones are hard and the deformity fixed, labor is almost impossible. If the attack is severe and progressive the uterus should be emptied and the ovaries removed while phosphorus is given internally.

Pyogenic Inflammation of Bone.

Bayard Holmes: When we have a pyogenic inflammation of bone we can consider it from a pathological or clinical standpoint. I shall only present the clinical features of the pyogenic infection of bone and such pathological observations as are particularly interesting from a clinical standpoint.

Pyogenic infection of bone is observed in three principal forms or manifestations. From an etiological standpoint, the infection of bone may occur through direct implantation of the infection into the bone through an external wound, or it may occur in the course of pyemia, attended by abscesses in other parts of the body, in joints, in the liver, in the lungs, in the kidneys or other viscera. In the third form there may be a distinct and particular form of infection which is found to affect bone marrow alone and no other tissues of the body. It is almost an infectious disease in itself. However, there is no pathological evidence, so far as I know, that the infection of bones in these three clinical manifestations is at all separate or distinct; that these infections are uniform, and that they are the result of a particular microorganism, the yellow pus microbe. It is possible in pyemic infection that other organ-

isms may infect bone, but if they do, they manifest themselves in such different ways as to result in almost a distinct disease. I have no reason to speak of the direct infection of bone. It is a simple infection similar to that of other tissues when it occurs by direct implantation of microorganisms into the bone tissue itself. The spread of this disease is similar to that of the spread of infection in other parts of the body, and the only difference from a clinical standpoint depends upon the unyielding and solid material in which the infection takes place, and the fact that the sequestrum which is formed in the course of the infection does not readily flow out of the opening through which the infection gains access.

The second form of pyogenic infection of bone which occurs in the course of pyemia is also one which has little surgical interest. The diagnosis is usually easy. There is a coincident endocarditis; the microorganisms are detached from time to time, are thrown into the circulation, and locate themselves, first, in the joint, then in the bone, then in some other organs of the body until, either through the disappearance of the primary focus or the atrium of infection, and the discharge of the infection, wherever it is located, the patient gets well, or the patient dies in the course of the disease. The real osteomyelitis of which we think, and which we ought to bear in mind, is a sort of acute infectious disease which is termed acute osteomyelitis. This is a disease which occurs, for the most part, in the very young. It rarely appears after thirty, and it usually appears before the age of ten. It is almost, in every instance, a secondary disease; that is, it follows some other infectious disease of a recognized infectious nature. For instance, it is most often found in children after measles, scarlet fever, whooping cough, or some other depressing infectious disease, which probably does two things—it diminishes the vital resistance of the patient, and opens some atrium of infection to the pus microbe. It is only in a few cases that we can find the atrium of this infection.

The history of acute osteomyelitis is often a very rapid and terrible one. A little girl has lived all her life in a dark basement. She has measles, a light attack; she is not very sick; has a little cough; is depressed, and has little appetite. After a reasonable length of time she apparently recovers, and goes out to play. She gets into a swing, has a good time for an hour or two, and possibly in the course of this amusement strikes her leg, elbow, or her knee against some hard object. It produces little pain; she does not cry. That night, perhaps in the middle of the night, she wakes up with a terrible shriek, and when the mother goes to the bedside, thinking the child has night terrors, she finds the child sitting up, with anxious face, with her knee up in her arms, and she is shivering from a terrible chill, complaining of terrible agony, and resists any attention which the mother may wish to give. The child will not allow the mother or anyone to approach her, and in the course of an hour or two she is found complaining of every footstep in the neighborhood of the bed. By this time, if a physician is called, he finds that the child has a temperature

of 104-5, that she has just passed out of a chill, and that she complains of an excessively tender spot about the middle of the tibia, the humerus, or some other long bone. This spot is so small it can be discovered only by the application of the end of the finger with a little tap, and only after the patient's confidence has been fully acquired by the physician. This little tap will elicit the greatest possible pain only in the area not to exceed one-half inch in diameter. If the child is given a hypodermic injection of morphine, the temperature remains; a leucocytosis appears, and in the course of twenty-four or forty-eight hours, sometimes two or three days or at the end of a week, other painful spots in other bones of the body appear, until at last, at the end of a few weeks or months, there are eight or ten, fifteen or twenty spots in which the same process has gone on, with some chills, and some rise of temperature. During all this time the child has lost weight. The focus of infection has shown itself as a subperiosteal abscess, which has penetrated the skin and has discharged itself. The pain in this region has subsided and she complains of pain in some other part of the body. After a time, worn out with infection, on account of abscesses in the kidney and in other parts of the body toward the end of the disease, the patient succumbs; and the autopsy shows what is ordinarily observed in the course of this osteomyelitis.

The history of the cases, when early operation is instituted, is quite different. "I have never seen in my own experience a case of acute osteomyelitis in a young person which was treated promptly by surgical intervention. When a child is observed by a person who recognizes the importance of the case during the first twenty-four hours when the focus in the bone is approached by an open incision and chiseling away the bone, the only thing which is found is an area of increased vascularization. The medullary portion of the bone, in the very middle is found to have a vascular area. If cultivations are made, the microorganism of osteomyelitis will be found, which is the yellow pus coccus giving a musty smell when developed upon potato, and in other respects seems to be similar to the ordinary staphylococcus aureus. Then, in the course of one or two hours the temperature subsides; it is 99; it never rises again unless the primary atrium of the disease remains and gives rise to a second or to a third localization of the infection, in which case it may be approached in the same way with the same prompt and gratifying results.

In the case of older individuals the chances of prompt surgical treatment are much greater. They know where the pain is, and they complain of pain in this or that particular spot. I can illustrate this by citing a very interesting case which came into my hands some years ago.

The patient was a young man, who jumped off a street car at Forty-third street and Drexel boulevard and hurt his tibia some time in the evening. He went home and to bed. About midnight he had a terrible chill, with a coincident agonizing pain in his tibia. He called his physician, but he could not go, but recommended me as a nearer physician. I went there

at one o'clock. The young man had just returned from Hot Springs, where he had gone on account of gonorrhea. He had still some evidence of the disease. He was sitting up in bed. He would not allow me to approach him. His painless leg was covered with bed clothes, while the painful leg was exposed bare. He would not for several minutes allow me to touch him. He would not let me put a thermometer under his tongue; but, at last, after I had secured his confidence, and assured him I would not hurt him, he allowed me to take his temperature, which was 104, pulse above 120. He had just come out of a severe chill, and he still felt uncomfortable. He allowed me to palpate the tibia with the end of the finger, and at a certain point I discovered an excessively tender spot upon the slightest thump on the bone. I marked the spot with ink. I examined his heart to find he had no evidence of endocarditis. I examined into his history, and discovered the fact I have mentioned. I looked him over carefully for pneumonia, because the chill was terrible, and then, having made a diagnosis, and his mental condition now being rather unreliable, I took the members of his family aside and told them what was the matter. I told them it was a case of acute osteomyelitis, the only one I had ever seen so early, and asked that I be allowed to operate at the first light. I gave one large hypodermic of morphine to relieve the pain, having had the assurance that I was to operate in the morning. Not satisfied with my own advice, the advice of two other men was secured. One of them arrived at the house in my absence, wrote his advice, recommending that the leg be poulticed for two or three days, and if at the end of that time the same symptoms continued, then I should approach the focus with a chisel. The other was Dr. Fenger, who, after I had telephoned him I had a case of acute osteomyelitis, left his work at the hospital and came to see the case. As soon as he had made an examination, he advised operation at once. I operated on this patient with the assistance of Dr. Johnson and Dr. Fenger. Having penetrated the bone, I found an area of vascularization not larger than a hazelnut, which I carefully scraped out. At the time of the operation the patient's temperature was almost 105. He was delirious, and in a wretchedly septic condition, appearing to be almost dazed by the infection, even with the one dose of morphine which I had given about one o'clock. His temperature fell soon after the operation to 99. I packed the wound, and subsequently made five dressings, leaving a plaster cast on, which I opened and closed over the dressing. He had absolutely no symptom after the operation. At the end of the fifth dressing he refused to pay my bill, took off the cast, and began to walk around town. He fell off an Illinois Central train, and was taken to St. Luke's hospital with a fracture of the tibia at the point where my operation was done, and was taken care of by some member of the staff. This is the only case of acute osteomyelitis which I have ever observed during the first twenty-four hours of its progress.

I have seen a large number of cases in the young late in the course of the disease, and I think three other cases in adults on whom

operations were done after the bone was so destroyed that a considerable portion of it had to be removed.

The point of great interest which attaches to acute osteomyelitis is one of early diagnosis and prompt surgical intervention at the onset of the disease. The disease, after it has once begun, after it has involved many bones and after the patient is worn out by sepsis, becomes one of the most serious conditions we have to deal with. Early in the case, if the primary focus of infection can be reached, if the atrium of infection can be removed, whether it be tonsil, or middle ear trouble, etc., the chances for recovery are so great that I would urge every one to make an early diagnosis, if possible.

I would like to speak of a case that recently came into my hands of twenty years' standing. A very intelligent young woman consulted me the other day, complaining of discharging sinuses at the occiput. Enough pus was coming out to saturate three or four dressings a day. She had had for twenty years infections in different parts of the body. They began on the fourth day after a chill when she was about a year old, and followed a rash. I presume this rash was a scarlet fever, but since that time she has had epidemic scarlet fever. After being sick for about two weeks, there appeared over the right eye a boil, which was opened, and pieces of bone during the following three months came out. The sinus closed up. The whole side of the head was swollen at the time, and at no time after that was she without some part of the scalp being swollen with pus which discharged, and small pieces of bone coming out. When she was five or six years old an opening was made over the mastoid and several pieces of bone sloughed out. The opening closed up, and since that time there has been no opening in that neighborhood. Openings have appeared elsewhere; she has had pieces of bone come out of her arm, etc., and I don't know what parts of the body have not been affected. Nearly every bone in the body has been attacked at one time or another. One of the hip joints was affected. It was opened and pus was discharged. When I examined her I went over the history of the case as well as she could give it to me, and presumed that the swelling of the right side of the face, with the appearance of an abscess over the right eye, indicated or stood for suppurative middle ear disease, which she was known to have had by a discharge of pus from the external auditory meatus within a week after the swelling of the side of the face. I presume the primary infection was through the Eustachian tube into the middle ear, into the antrum, and from there over the face and other parts of the body, lasting for twenty years. However, after I operated on her, I created an opening in the bone sufficiently large to find there was a large granulating sinus leading toward the right side of the head just under the skull. Then I abandoned that method of approach and made an opening in the bone where I would ordinarily open for extradural abscess, namely, about an inch behind and an inch above the external auditory meatus. When the chisel passed through eburnated and thickened skull at this place I am sure that at least

six ounces of pus poured out through that hole from somewhere. This woman was very intelligent; she was witty and bright before this operation was performed, and I certainly had no suspicion, nor anybody else, that the skull contained any less than the ordinary amount of brains, yet there was room for six ounces of bad pus to come out. Believing I had so extensive a malformation of the contents of the skull, I decided to leave drainage and wait until a subsequent time before operating to remove the mastoid cells, antrum, and any sequestrum which might have been left behind from the old middle ear disease. So I am waiting now for that. I speak of this case as one in which a girl suffered from osteomyelitis for all these years, and the presumption is that a diagnosis could have been made much earlier in the case, and that the primary atrium of infection was through the middle ear and from there into the circulation similarly.

Surgical Treatment of Certain Fractures.

L. L. McArthur, Chicago: Mr. Chairman and Gentlemen—There has been some misunderstanding on my part as to the subject for which I have been asked to open the discussion. On receipt of the program I learned that it was to be on "The Surgery of Bone Diseases," whereas I had understood "Surgery of Bones" and had selected the special topic of operative treatment of fractures as offering perhaps something in the way of interest. The surgery of bone diseases may be said to have been perfected years ago, except in so far as asepsis and antisepsis has been a factor. It would then be futile to take up your time by simple repetition of the methods which differ but little from the recognized procedures of thirty years ago. I have instead endeavored to direct your attention to what may be accomplished in the handling of some special fractures, which until very recently have been the source of much concern both to the patient and his physician.

In our modern hospitals under the new aseptic and antiseptic methods, the surgeon who has demonstrated to his own satisfaction his mastery of "surgical cleanliness" has no undue hesitation in opening any irreducible fracture, enlarging any compound fracture wound, or opening joint communication with such a fracture in order to meet the surgical indications in the given case.

In doing this there are I believe a few factors which aid in securing a successful result which you will permit me to re-emphasize.

I. The necessity of avoiding the handling of the bone fragments with the ungloved hand. Those of you who have done bone work prior to the days of gloves have, I have no doubt, had an experience similar to mine: this is to find on completion of the operation that numerous small abrasions of the hands with loss of skin substance had occurred. These had been made by the sharp jagged edges of the bones or the cut ends of the wires in their insertion. What had become of the fragments of epidermis? Left in all human probability in the wound. Now it has been demonstrated to a conviction that although the hands may be washed so

clean that no culture can be obtained from their surfaces, if with a sterile knife or scissors a small particle of the horny layer of the skin of the same hands be removed and planted in culture media, growths will almost invariably be obtained. In other words, with the ungloved hand we are liable to plant an infection that may undo an otherwise ideal procedure.

I desire, therefore, to urge that all bone wirings, resections, etc., be done with protection to the hands, and that **not** with the delicate laparotomy glove, but the "extra heavy" quality of pure gum glove, especial care being given from time to time during the operation to noting their integrity. Let the command *Die Finger fort vom Gelenk* apply also to fracture fields.

II. That when it is feasible to obtain 48 or 72 hours preliminary sterilization of the field of operation, without endangering the chances of the patient's recovery, this should be done and the recognized methods employed. Certain compound fractures may present conditions of so probable infection that such a delay would be ill advised. Good judgment therefore will be here required. Simple fractures complicated by irreducible fragments, if these are not making direct pressure on the vessels and nerves, can easily be left until all necessary cleansing and sterilizing of the field shall have been accomplished. Again **simple fractures** complicated by connections with joints (example fractured patella, ulna, etc.) should be allowed to pass the period of traumatic reaction before operation. Since there is always a traumatic synovitis induced by the injury and the blood extravasation, that could very easily be made worse in its inception, but which in the stage of subsidence is not likely to be. We wait a week or ten days before such type of fractures are operated.

III. The Periosteum. The influences of old teachings still obtain among many operators inducing them to reflect back the periosteum from the site of drill hole instead of using every pains to avoid its reflection. Periosteum may be reflected in an unbroken long bone without causing a death of the uncovered portion, but when the periosteum is reflected near a fracture, the circulation is so badly impaired that a certain area may be without nutrition. If then the wound be not absolutely sterile, the aseptic bone graft becomes a septic necrotic mass and may defeat the object of the operation. Today, no surgeon, I believe, is under the impression that absolutely no micro-organisms gain access to his field of operation, but considers that if he leaves no dead tissues, large blood clots, etc., behind, the few that do gain access will be cared for by the normal antiseptic properties of the tissues. Hence loose fragments in the wound, and bony ends without periosteum, being liable to necrosis, should be avoided.

IV. Site of election for insertion of wires.

As a result of several experiences with the fracture of the wire used for the fixation of broken bones, I think some consideration of the mechanisms should attend their application. One's early experiences with wiring begin usually with the making of the drill holes for the wires in the most easily accessible parts of

the wound, without much regard to the function they are to subserve. The prevailing idea being that the essential to be obtained by wiring is as nearly rigid a union as possible, the wires are inserted and tightened with that idea in view. To accomplish this the wires are placed at those places which the operator believes will receive the greatest strain, while as a matter of fact if the wires are applied so that the probable movements in the extremity will **not** exert a great leverage upon the wire loops uniting the bones, they will not be broken as so many are, and still subserve their purpose.

Character of Wire to be Used. Ordinary wire as supplied by the instrument makers and as used in the clinics is too frequently of a very fine grade, altogether too weak to sustain the strains to which in a muscular subject it will be subjected. I would therefore urge that a number from 12 to 15 scale be used instead of the 18 to 20 ordinarily for sale. (Example passed around).

Medico-legal Aspect of Certain Fractures.

With the new era of antiseptic treatment of compound complicated fractures, one is justified in daring under proper conditions to attempt the saving of limbs for which ordinarily speaking a surgeon might be condemned by his confreres. In such cases to avoid possible legal complications, the dangers should be explained to the patient before witnesses and his consent obtained (in writing if feasible).

Tuberculous Disease of Bone.

John Ridlon: This subject, as it appears on the program, was selected by the Secretary of the Society. It is a large subject for a few minutes' talk particularly when we consider that Professor Senn occupies five hundred Royal Octavo pages in dealing with the subject under practically the same title. Personally, I have had very little experience in bone tuberculosis outside of that form of the disease which is located in the bone ends and which ultimately involves the joints.

I shall say nothing about pathology or morbid anatomy other than to remark that from a practical standpoint the symptoms accompanying these cases are usually the same whether the disease begins primarily in the bone ends, or it reaches the bone ends as secondary to synovial disease. Briefly, and in a general way, the symptoms of joint tuberculosis are loss of function, or diminution of function, due to involuntary muscular spasm restricting the motion of the joint; deformity at the joint from this involuntary muscular spasm, and muscular atrophy, in practically all cases. In fact, in twenty-five years' experience I have only seen one case in which there was no atrophy of the muscles controlling motion at the joint. There comes in most cases distinct pain. As a rule, this pain is at the knee, although it may be at the hip. On the other hand, the case may go through the entire course without any complaint of pain at any time, for as long a period as four years. Next comes localized tenderness, which is less frequently present than pain. And next, we

have abscess. An abscess is present, so that it can be seen in about half of the cases. So much in a general way for the symptoms which will enable you to make a diagnosis of tuberculosis in the bone ends near the joint.

If the disease has started as a synovial tuberculosis and has extended from there into the bone, you will ultimately get swelling in addition to the other symptoms, even if there is no tubercular abscess. But if the disease has begun in bone and has not entered the synovial cavity, you will not have swelling unless abscess is present.

As to the prognosis of bone tuberculosis, and the time the disease runs, it may run without treatment from one year to many years, perhaps ten or more. With treatment, the duration of the disease is diminished very considerably, but hardly any case can be expected to recover under mechanical treatment in less than two to four years. Under operative treatment one may be more fortunate, or one may be no more fortunate.

As to function of the joint and of the limb without treatment, deformity practically always results and remains, and in a large per cent of cases results in a true or false ankylosis of the joint. Under efficient mechanical treatment almost all cases can be corrected as to deformity. A considerable number of cases will recover under mechanical treatment, with good motion of the joint. Most of them will recover with some restriction of joint motion and some will recover with no motion of the joint. Under operative treatment the result as to function is less good than under mechanical treatment.

As to the treatment of these cases, it may be by mechanical means alone; it may be by operative means alone, or it may be by a combination of both the mechanical and operative means. The principles of mechanical treatment are to correct any deformity existing in the neighboring joint, to immobilize the parts sufficiently to control all muscles that move the joint, to protect the joint from weight-bearing, if it is a joint in the lower extremity, to save it somewhat, if it be one of the joints of the spine, or more than one, and to improve the patient's general condition, so far as possible, and simply wait for him to get well. And he gets well, in the early cases, in a year or two; in the later cases, in from two to four or six years, with a better functional result than can be had in any other way. The worst results from mechanical means will be better than the best results that can be had by operative procedures alone. By operative measures in the treatment of these cases, a more immediate result can be had in a considerable proportion of them. Three months may be a fair time if one is successful in entirely removing all disease. But, as a matter of fact, these cases are comparatively rare, and are comparatively fortunate cases if the disease is cured in that length of time. Most cases must be treated mechanically almost as long after operation to get a good functional result, and to prevent deformity, as if they were not operated at all.

As to a combination of the two methods

of mechanical and operative treatment of tuberculosis in bone ends. If the operative measures be intelligently performed, and if the mechanical treatment after operation be skillfully and successfully carried out, the best results can be had by the combined method of treatment. By intelligently performed surgical operations, good results can be secured if one knows exactly the location and extent of the bone focus, as can be told by an X-Ray picture. If then the negative be placed in the window of the operating room and consulted during the operation no unnecessary bone need be removed. But this is only preliminary to the treatment of the case. If the case is simply immobilized until the wound heals, it will be found, weeks afterwards, that the result as to function is not good. By efficient mechanical treatment after an operation, we mean that the patient should be treated with such apparatus as shall maintain the limb at its normal length and in its normal position; shall positively prevent any deformity in the joint; and shall give continuous, fixed, effective extension, so that no shortening shall result. The patient must be kept in bed continuously with this fixation and traction apparatus, until an X-Ray picture demonstrates that the bone cavity resulting from the removal of the disease has been filled with reasonably good and solid new bone. After that the patient may be allowed up for the first time, and to get about on his apparatus, maintaining fixation and traction, and continue to use the apparatus until all symptoms of the disease have disappeared, whether it be a week, a month, or a year, which it is more likely to be.

By omitting the mechanical treatment, one may not get a good functional result for the patient, and by omitting the operative treatment one may not get that rapidity of cure which can be expected from a thorough removal of the disease.

Regular meeting held in Schiller Hall, December 2, 1903, with the president, Dr. R. B. Preble, in the chair.

Report of a Case of Sympathetic Ophthalmia.

Oscar Dodd: This patient, a man aged 37 years, came under my care at the Illinois Charitable Eye and Ear Infirmary on September 30th, and I got the following history: About four months ago, while mining coal, he was struck in the left eye by a foreign body. An ulcer of the cornea developed, and he was referred by his physician to an oculist in a neighboring town. He found a large ulcer of the cornea with the anterior chamber about a third full of pus. He cauterized the ulcer and carried out treatment, but as that did not check the progress, four days later he performed a Saemish incision that is a cut through the ulcer, letting out the hypopyon. The eye then progressed favorably, and in a few weeks he went home. The ulcer had healed over, the eye was quiet and the tension was normal. He could see hand movements at a distance of five feet and see a light over the whole field. He reported to the doctor occasionally, and one week before the last visit he found the eye

slightly more inflamed and the tension diminished. He changed the treatment, and at the last visit the eye looked well and the tension was normal. He was instructed to return at once if the eye gave him any trouble, and went back to his work.

A few days after this and about seven weeks after the injury, he began to have trouble with the right eye. Instead of returning to his former oculist he went to one in a neighboring town. He, thinking it was a syphilitic iritis, put him on treatment, mercury and iodides internally and atropine in the eye. There were adhesions of the iris to the lens, which partially broke up under treatment, and the vision improved to 2-3 of normal by August 1st, and remained so for about a month. The injured eye had remained quiet during this time with only a few congested blood vessels at the lower side of the cornea, and there was good light perception.

Just before the right eye grew worse the injured eye became soft and inflamed, and the doctor then realized that it might be the cause of the trouble in the other. He did not remove it, however, giving as his reason the old teaching (which should be eliminated from the text books) that the exciting eye should not be removed after the beginning of sympathetic inflammation. His sight grew rapidly worse, so that within two days the vitreous was filled with opacities, the pupil covered with exudate, and when he came to Chicago two weeks later he could only see fingers at six inches.

I found the characteristic appearance of sympathetic ophthalmia, the iris drawn back at the periphery, pupil of fair size and filled with exudate. The eyeball was intensely congested and some tender to pressure. The injured eye had a large opacity of the cornea, into which the iris was adherent, the anterior chamber was obliterated, the tension minus and no vision. I had it removed at once and put him on thorough treatment. At first he was given Sodium Salicylate, two drams a day, with inunctions of mercury, atropine in the eye, hot applications and subconjunctival injections of salt solution. Under this vision improved so as to count fingers at 4 feet, and the exudate absorbed from the center of the pupil. Without any known reason three weeks later the blood vessels of the iris became enormously congested and new ones formed on the surface of the iris so they stood out like reddish tumors. The pupil filled with exudate and hemorrhages occurred in the anterior chamber, so that vision was reduced to the perception of light. I changed the treatment to the iodides and mercury, but as it did not improve, I started him on the oil of Wintergreen, 30 minims three times a day. The eye has grown better and the exudate has partially absorbed from the pupil. At present the iris is pushed forward by the exudate behind it and the blood vessels from the margin of the iris pass into the exudate in the pupil. He can count fingers in a good light at about 12 inches.

A careful pathological examination of the injured eye by Dr. E. V. L. Brown, the pathologist at the Eye and Ear Infirmary, showed

the following conditions: The posterior part of the eye was practically normal, almost no changes being present in the choroid, retina and optic nerve. The anterior chamber was obliterated and the inflamed iris was in contact with the cornea and adherent at one point. The ciliary body was the principal seat of inflammation, a large mass of exudate being thrown out, binding the iris, ciliary body and lens together. At one point a small foreign body was found imbedded in the ciliary body. In the vicinity of it are some giant cells due to the irritation. It is undoubtedly a minute piece of coal or stone not more than half a millimetre across in the section where it was found. Whether any other particles were in the eye we can not say. No bacteria were found in the specimens examined.

The mistake of considering this case as one of simple ulcer of the cornea was a most natural one, for at the time he was first seen, the anterior chamber was filled with pus and no sign of a perforation was present. That the small foreign body lodged in the ciliary body was the cause of the subsequent trouble with the other eye is without question and should be a warning in handling all cases following injury.

The manner by which inflammation is produced in one eye by an exciting cause in the other is still a disputed question. There are several theories, the transmission of germs along the optic nerves, the irritation of the ciliary nerves, the transmission of the toxins through the lymph spaces around the nerves, etc. As to the conditions that may excite inflammation in the other eye, we may say that any wound of the ciliary body or base of the iris, especially if followed by an inflammation, is liable to produce it. Foreign bodies in the eye are a source of danger at any time and may cause the loss of sight years after. I have known two cases of sympathetic ophthalmia to follow perforating ulcers during the course of gonorrheal conjunctivitis.

The inflammation in sympathetic ophthalmia differs from simple iritis in several particulars. The exudate in iritis is from the iris alone and will fasten the margin of the iris to the lens, and if severe, may fill the pupil. In sympathetic ophthalmia the exudate is principally from the ciliary body filling in behind the base of the iris and drawing it back so it is fastened to the lens over its whole extent. The pupil is filled with exudate, as is also the vitreous making the eye liable to shrink when the inflammation subsides. Should the eye become quiet enough to admit of operative measures, the only way the sight can be improved is by the removal of the lens with a portion of the iris and exudate. If this does not excite an inflammatory reaction to fill the opening, it may be possible to get some vision.

The points I wish to call to your mind by this case are: The necessity of care in watching any case of injury that sympathetic inflammation may not develop and the danger of passing over any trouble in the other eye, however slight, as being a simple matter. I wish

particularly to emphasize the hopelessness of treatment in these cases, as no severe case has ever been cured.

Discussion of Dr. Dodd's Paper.

Willis O. Nance: I have had the opportunity of following this case from the time the patient entered the hospital. At the time of the first examination I was struck with the malignancy of the process and this has continued up to the present. These cases of sympathetic ophthalmia are of particular interest not only to the ophthalmologist but also to the general practitioner because of the usual fatality as regards vision, and the absolute necessity of early and correct diagnosis.

As regards the futility of the treatment, as mentioned by Dr. Dodd, I wish to refer to the recently advocated treatment of Valois. This consists of the injection of cyanate of mercury into the orbit of the exciting eye after its removal. He reports two cases in which the treatment was given a trial. One of the cases recovered with normal vision; the other with 20-30. These results ought to be stimulating to us.

The lesson to be learned from these cases is that we should be conservative as regards prognosis in all cases of injury of the eye, no matter how trivial they may seem to be at the first examination. A short time ago a man came under my care who had his eye injured in a drunken brawl. He consulted a physician at the time of the injury and was under his care for about a week when he was dismissed with the statement that the eye would be alright in another week. The injury was a wound of the ciliary region which is more apt to be followed by sympathetic ophthalmia than any other would. The tension of the eye is low; the iris is discolored and the chances are that a sympathetic ophthalmia will result unless the eye be removed at once.

Dr. T. J. Sullivan presented **Patients illustrating non-union of Fractures**. The remarks of Dr. Sullivan have not been received.

Discussion of Dr. Sullivan's Cases.

Chas. C. O'Byrne: I recently saw a case of non-union that, in spite of three operations, failed to unite. A street car conductor broke his tibia in three places; at the ankle, in the middle of the bone and near the upper end. The upper and lower fractures united very promptly, but the middle refused to unite, possibly because of the destruction of the nutrient artery at that point; or, the circulation in the bone was insufficient for callus formation at the site of all the fractures. There was no lack of apposition in the fragments, nor any overriding, nor was there any interposing tissue, and yet no callus was formed. The ends of the bone were freshened and wired but a false joint formed; firm fibrous union resulted but no callus. I believe that it simply is impossible to get any union in that case.

I am glad that the subject of fractures was brought up because this subject is neglected in our schools; the time being given to more spectacular operations, such as laparotomies.

The treatment of compound fractures has

bothered me more than the treatment of a simple fracture. In a case of delayed union that we had at the County Hospital, suppuration at the ends of the fragments occurred. The fracture was a transverse one. The skiagraph showed the bones in good apposition at the end of the fourth week, but instead of having callus formation, there was a formation of pus. The wound was opened and drained, and finally, as his condition did not improve, we amputated the leg. He failed to improve, and when we discovered that there was pus in the capsule of the hipjoint, disarticulation of the thigh was done but the patient did not survive the operation. There was a fatal result from an apparently trivial injury. The pus seemed of a mild character and the patient had little fever. Undoubtedly the infection had spread to the hipjoint before we amputated the leg.

Dr. Robert W. Hardon read a paper entitled **Hypernephroma of the Kidney**, with report of the case. This paper has not been received.

Discussion of Dr. Hardon's Paper.

A. C. Croftan: I wish to correct one misconception, viz.: that I diagnosed the character of the tumor before the patient was operated. I was called in consultation to decide whether we were dealing with a stone and hydronephrosis or a tumor of the kidney and I decided in favor of the latter diagnosis. I expressed the hope merely that it might prove to be a hypernephroma of the kidney because I was interested in this class of tumors.

Dr. Hardon mentioned the peculiar chemical reactions of hypernephroma tissue, that I described in Virchow's Archiv some time ago. These are really so striking and so easily verified at the operating table, that they can be used for diagnostic purposes without difficulty. I think it is possibly in part due to the introduction of these tests that so many of these tumors have recently been described. Here in Chicago there seems to be an epidemic of hypernephroma. Microscopically, unless they present such a beautiful picture as this case, they are not diagnosed easily; chemically it is an exceedingly simple matter for hypernephroma tissue gives exactly the same reaction as suprarenal tissue. These typical reactions of suprarenal tissue, that I first described, are the following:

(1) A solution of iodine and starch has a blue color: if mixed with hypernephroma tissue this blue color disappears immediately. I make an iodine and starch solution; pour it into a mortar and grind up with it a little piece of the suspected tissue. If it is hypernephroma the blue color disappears in a minute or two. Dr. A. O. J. Kelly, of Philadelphia, and I worked this out very carefully and found that no other kidney tumor gave this reaction nor does normal kidney tissue give it. A man in Cincinnati, I think, advanced the objection that P. D. & Co.'s thyroid. Libby's meat extract, Fairchild's essence of pepsin, and a few other things, gave the same reaction, but I told him that these commercial products would hardly be looked for by the surgeon when exposing a

kidney tumor and the gentleman has since subsided.

(2) Suprarenal tissue, and also hypernephroma tissue, possesses the power of converting starch into sugar. If you take a starch solution and add a little piece of hypernephroma tissue and leave the mixture in the incubator for six or seven hours, the starch is converted into sugar, and you get a distinct Fehling reaction.

(3) If you make an emulsion of hyperphroma tissue and inject it into an animal, a marked glycosuria is produced.

The interesting feature about it all is this: That a tumor of this character which develops from microscopic rests inclosed in the kidney structure at some time, possesses not only the morphological, but also the chemical and physiological characteristics of the tissue from which it is derived. It is astonishing that these tumors do not create more systemic disturbances for we have here really an overgrowth of functionally active adrenal tissue and one should expect the entrance of so much suprarenal excretion into the blood would produce the same peculiar phenomena that we see in animals after the injection of suprarenal extract. As a matter of fact this is not the case and here remains a puzzling discrepancy to be solved.

A Case of Enormous Prostatic Calculus, Secondary to Traumatic Stricture of the Perineal Urethra—Suppuration About the Stone, Secondary Abscess in the Pelvis, Extensive Urethral-Rectal Fistula, Following Perineal Section for the Calculus—Perineal Rectoplasty For the Closure of the Fistula—Recovery.*

G. Frank Lydston: M. B., farmer, age 34, of Pierre, S. D., first consulted me on the 15th of June, 1900. His history was as follows: He had been well until four years previously, when his horse fell upon him, producing various injuries, the most severe of which was apparently a blow upon the perineum. This was followed by hematuria for one week. There was no urinary obstruction nor retention and he was apparently as well as before ten days after the accident. He remained well for six months. At the end of which time he noticed difficulty in micturition. This condition increased steadily. One year before consulting me he passed several small calculi—he has passed calculi at intervals since. At the time he first consulted me the stream of urine was very small and considerable difficulty in evacuating the bladder, with occasional chills, especially if the urethra was interfered with by instruments.

Upon examination I found a hard callous stricture in the bulbo-membraneous region, with secondary cystitis. This was permeable to a No. 20 Charriere. Perineal section was advised and preparatory treatment instituted. The patient meanwhile met some physician who told him he could be cured by medicine—the patient returned home after an alleged cure.

Nov. 28, 1901 the patient returned to me for examination. I found a large tumor in the prostate, jutting into the rectum, of stony

hardness and absolutely immobile. Diagnosis of secondary calculus embedded in the prostate. The patient could still micturate and the urethra was permeable to 20 French. I proposed supra-pubic section and perineal urethrotomy. The patient again consented, but deferred operation for several days, during which time he again fell in with medical charlatans who assured him the diagnosis was wrong and he could be cured by remedies. I secured a skiagraph of the stone ere he again departed for Dakota, cured by medicines, and did not hear from him again until Oct. 12, 1903, when he was brought to my office by Dr. Ruble, who gave the following history:

In May last suppuration occurred about the calculus and a secondary abscess formed in the pelvis. This was evacuated from the external inguinal ring. More than a pint of pus was evacuated and the abscess promptly healed. The calculus was removed from the prostate by way of the perineum and for some weeks the patient did very well passing his urine per vias naturales.

Some time after the perineal section it was noticed that a pouch containing fluid had formed in the perineum. Dr. Ruble opened this pouch, evacuating a quantity of decomposed urine and pus. The cavity did not heal and thereafter the urine and feces were discharged through the perineal opening and also appeared at the meatus. Urination took place entirely by way of the perineum.

When I examined the patient in October I found a large pouch in the perineum communicating with the perineal wound lined by pseudo-membrane and at its posterior extremity connected with the urethra. In the perineal portion of the urethra was a firm callous stricture extending from the middle of the perineum to the bulbo-membraneous junction. On rectal exploration I found a fistula in the anterior walls of the rectum, about two inches in length and half an inch in width.

Operation. I made the ordinary v incision in the perineum. The urethra and rectum were separated to a point about one inch above the upper angle of the fistula. This point corresponded very nearly with the prostatic-vesical junction. The operation was tedious but I succeeded in closing the rent in the bowel with three superimposed lines of chromicized catgut. The two lines first inserted were made continuous: the final line of suture was the ordinary Lembert. Especial effort was made to get as large a surface of denuded tissue as possible. When the suturing was complete a considerable buttress of freshened tissue covered the opening in the bowel. The callous stricture in the perineum was cut away, leaving merely a strip of mucous membrane on the roof of the canal. When this portion of the operation was completed the floor of the urethra was entirely gone from the middle of the perineum to the prostatic-vesical junction, the internal sphincter vesicae being alone intact. The sphincter ani having been thoroughly dilated at the beginning of the operation, a large tube wound with iodoform gauze, was inserted into the bowel to protect the repaired area from disturbance

from gas and feces. The operation was completed by packing with iodoform gauze the extensive cavity which now occupied the perineal body as far as the orifice of the bladder. A catheter was retained for 24 hours, after which time no attempt was made to divert the urine from the track of the wound. On subsequent removal of the catheter the packing in the perineum was found so effective that the urine in great part began to flow through the normal channel.

The patient's present condition is apparently extremely satisfactory. The perineal wound is almost entirely closed and the urine escapes by the normal channel. No feces have escaped into the perineal wound. Rectal examination with the finger fails to detect any solution of continuity in the bowel, whereas previous to the operation the finger readily passed from the interior of the bowel through the fistula and as far as the length of the finger would permit into the perineum anteriorly and into the various pockets about the neck of the bladder. It will thus be seen that the primary union of the fistula was almost complete. Complete closure is probable. The calculus removed in this case weighs 720 grains.

Discussion of Dr. Lydston's Paper.

Wm. T. Belfield: Dr. Lydston's observation is unusual and valuable. It is to be regretted that the case did not come to operation at his hands earlier, as it might have been possible to decide the question, which even he cannot now determine, whether this calculus was not formed in the utricle, rather than in the prostate. A case is recorded in Oberlaender's *Centralblatt* in which a calculus as large as a goose egg was found between the bladder and rectum. It was removed and with it a piece of the enclosing sac which had the structure of the vagina, corresponding to that of the utricle. At a later operation, rendered necessary by the persistence of a fistula, the entire sac was removed. None of us pay much attention to the utricle; it is possible that many cases that we regard as lesions of the prostate are really lesions of the utricle, a matter of great etiologic interest.

Dr. Lydston (closing the discussion): The principal point of interest in connection with this case was the perineoplasty and the result obtained, because such operations for closure of a urethro-rectal fistula are not very promising. Another interesting point is the rapidity with which this stone formed, within eighteen months. It was not perceived either by sound or finger at the time of the first examination.

With regard to the relation of the calculus to the utricle, I am unable to say anything. I think it would have been difficult to outline the relation between the two at the time I finally diagnosed the calculus. The rectal tumor was so large that Drs. M. L. Harris and J. B. Murphy who saw the case were rather inclined to think that it was one of neoplasm of some kind. I had the point of vantage in the diagnosis because I knew of the passage of calculi secondary to the traumatic stricture.

It is unfortunate that I did not have the opportunity of operating on the case primarily,

because in that event I might have been able to contribute something of more importance both scientifically and etiologically. I wish to again emphasize the importance of a free dissection and separation of the urethra from the rectum in these cases of urethro-rectal fistula. I believe that we often fail in the operation because the dissection is not sufficiently free and because we are inclined to try to get speedy union of the perineal wound after a plastic operation. I have just reoperated a case in which I made the mistake of endeavoring to get primary union instead of packing the cavity between the urethra and the rectum and allowing it to heal by granulation. Another point I wish to reiterate is the advisability in performing these plastic operations of trying to prevent the juxtaposition of the openings between the urethra and the bowel. We are compelled in these cases to work through a narrow incision and to split into two what is practically a buttonhole between the urethra and rectum.

The important physiologic lesson to be learned in such cases that patients in whom the membranous urethra is destroyed are not necessarily affected with incontinence of urine. I confess that I was somewhat shaken in my belief that the membranous urethra was so important a structure as some hold with reference to its sphincteric action, in micritrition.

Case of Surgical Kidney Diagnosed as Appendicitis; Almost Complete Anuria; Operation and Recovery.

S. M. Strohecker, Chicago: Mrs. W. B., married; 25 years old: Family history, father died of heart disease, 1901, aged 68; one brother died of consumption, 1902, aged 16; mother died, cause of death unknown, aged 33.

Personal history: She says she has had all the usual diseases of childhood. Last illness was typhoid fever in 1890, which kept her in bed 13 weeks. She fully recovered and was in good health until her present illness, which dates from February 28, 1901, when upon going down an unusually steep flight of steps she slipped and jolted herself severely, slipping down three or four steps, but did not lose her erect position. She complained of a great deal of pain immediately following this jolting, which seemed to be greatest on right side "near the waist" and in back. After resting a few moments, she was assisted up stairs, and for several days suffered considerably from soreness over abdomen and in muscles of back and limbs, but did not have a physician, and in a few days felt better.

On the 26th day of March, following, while riding on a street car, she was suddenly taken with severe pains in right half of abdomen, which she thought were excited by the jarring of the car in crossing the railroad tracks. Pains grew more severe and she was brought home and placed in bed. I saw her for the first time that evening. She was in bed; apparently suffering great pain. She had vomited at frequent intervals all afternoon and evening, which greatly increased the pain, in fact, even one

walking across the floor seemed to increase it. She had no elevation of temperature. Pulse was rapid and small.

Physical Examination. A woman weighing about 125 pounds; abdominal muscles rigid and board-like over entire abdomen; more so on the right side; the legs were flexed; palpation revealed nothing, as patient was too sensitive to allow thorough examination. No especial tenderness over McBurney's point.

Treatment. Pain was controlled with 1-8 grain of morphia hypodermically every two to four hours. Hot fomentations were applied to abdomen. Calomel in 1-10 grain doses, repeated until 1 grain had been taken. Next morning her bowels moved freely; abdominal tenderness had not lessened; bladder was not distended, nor had she voided urine. Nausea present, but no vomiting; no desire for food; she was quite thirsty. I ordered cracked ice and buttermilk. During the afternoon she voided a small quantity of urine, which was free from albumen and blood. Hot fomentations were ordered renewed and repeated at frequent intervals, together with a mixture of citrate of potash, F. E. Couchgrass, etc.

Patient at end of 48 hours was in practically the same condition. Next day she was more comfortable; pain had lessened, but aggravated on slightest movement. Urine remained scanty; about one-fourth the normal quantity. It did not contain albumin, pus nor blood. After a few days her appetite returned, but the abdomen remained tender. Under anesthesia it was thought that a tumor could be made out on right side, oval in form, its center opposite the umbilicus. Urine grew more scanty. I advised her removal to a hospital.

She was removed to the Presbyterian Hospital under the care of Dr. Graham, on March 31st, and kept under observation until April 15th, when she had a similar attack as before and was operated upon for appendicitis. The appendix was about 4 inches long, somewhat clubbed, held down by adhesions and had a concretion at its distal end. She remained in the hospital a few weeks longer; was brought home, and had frequent attacks similar to the first attack of March 26th; not quite so severe, however, but each one lasting for from a day or two to ten days or longer, each one leaving her much weakened.

She was run down, nervous, not able to do any of her housework, owing to pains it caused and weakness. Her urine remained scanty since her fall in February, 1901, and could not be increased by liberal use of diuretics, water, buttermilk, etc., quantity averaging ten to twelve ounces every 48 hours.

I suggested that she see Dr. Fenger who ordered a skiagraph taken but who died however, before giving an opinion. During the spring of 1902, she suffered from attacks more frequently than before, but did not consult a doctor, feeling it was useless, and simply let it wear away, remaining in bed a week or ten days. Each attack was similar in character: Sudden onset, pain, vomiting, tenderness on right side of abdomen, rigid abdominal walls. Her last attack began June 6, 1902, and when

I called I found conditions similar to preceding attacks. A general anesthetic was given and again a kidney-shaped mass was felt in right side of abdomen; moveable; and about the size of a normal kidney. A cystoscopic examination was also made, but was negative as to results.

A provisional diagnosis was made of *kinked* ureter, prolapsed kidney, or some obstruction to outflow of urine, but probably not stone, as no albumin, blood or pus was ever found in the urine, until a few days before operation. She was removed to St. Luke's Hospital June 21st for exploratory operation, at which time she weighed 91 pounds. Her hemoglobin was 36 per cent, red cells 3,800,000 and white cells 5,600, and urine not over ten ounces every 48 hours.

Operation. Incision was made beginning about 1 inch below the 12th rib, extended downward and outward to crest of ilium. Muscles were divided and a large quantity of fat encountered, but no kidney was felt. On further exploring with finger, kidney was reached high up, its lower pole about on level with 12th rib and freely moveable. The kidney was delivered out of wound into gauze pads, when it was found to be congested, bluish in color and evidently under great tension, and enlarged about 25 per cent. The capsule and kidney parenchyma were incised when capsule retracted, with kidney tissue proper bulging out of wound. A probe was passed. No stone was found, nor was there a kinked ureter, or valve formation due to adhesions. Hemorrhage was free.

The capsule was then stripped back from edge of incision and parallel to it for its entire length. Catgut sutures were used to unite the kidney tissue. The kidney was then dropped back into place and held somewhat higher than normal while the capsule that had been stripped back was used as a sling and united with continuous sutures to fascia. Muscular layers and fat were united by continuous catgut sutures, and the skin with silkworm gut. A rubber tube and strips of gauze for drainage were inserted into wound down to kidney and wound dressed as usual. Patient was put to bed and during night nearly died from exhaustion. Normal salt was freely used by injecting under each breast and strychnine hypodermically. Dressings were saturated with serum and removed at end of four days, but no leaking of urine. Drain was removed at end of week. Stitch abscess gave trouble for a few days, but on omitting gauze drain and swabbing sinus with 1-2 strength Tr. Iodine it healed. Patient was removed to her home July 8th, eighteen days after operation.

Subsequent History. Patient is now, fourteen months after operation, in perfect health; appetite is good; she is able to do all her housework, washing, etc.; voids about 3 to 3½ pints of urine in 24 hours, whereas in 1902, before operation, about 10 to 12 ounces in 48 hours. She now weighs 140 pounds, while on admission to hospital her weight was 91 pounds.

Permeability of Rubber Drainage Tubing to X-Ray.

Joseph F. Smith: The following investigation was carried out at the suggestion of the late Professor Christian Fenger, and is based

upon a case which occurred in his service at the Presbyterian Hospital in the latter part of the year 1900.

Miss C., aged 29, was admitted to the hospital suffering from an extensive tubercular abscess in the region of the right iliac synchondrosis, which had previously been opened and drained without improvement. The patient was anesthetized and through an extensive incision part of the right ilium was resected, and an extensive tubercular abscess found in the right iliac fossa. From the abscess two sinuses were discovered, one leading upward along the psoas muscle toward the upper lumbar vertebrae, and the other leading downward into the cavity of the pelvis. These sinuses were isolated and explored as far as possible, and drained by means of No. 8 Nelaton catheters, one being placed in the upper sinus to a depth of eight or ten inches, and the other to an equal depth in the lower sinus. Both were brought out through the external incision at the same point, and secured by fastening with safety pins, and a large absorbent and protective dressing applied. A few days later, when dressing the patient, it was discovered that one of the catheter drains had disappeared from the wound, the other being still in place. Careful search failed to reveal the presence of the drain in the dressings, and the special nurse in charge of the patient, upon being carefully questioned, declared positively that the tube had not fallen out during any of the dressings. The conclusion that the tube must have slipped into the wound and been lost in the abdominal cavity or in the cavity of the pelvis seemed most probable. After going over the facts carefully, Professor Fenger decided to reopen the wound and make careful search for the missing drain, and accordingly ordered the patient prepared for operation. On the day set for the operation it was decided to take an X-Ray picture through the region in which the rubber drain had been placed, to see if any shadow of the missing tubing could be obtained; although at that time it was not thought probable the rubber tubing would cast a shadow of sufficient density to enable it to be seen through the thickness of the body. However, a skiagraph was taken and contrary to expectations a very distinct and definite shadow of the upper tube was obtained. Since the drains were both exactly the same size and kind of material, both being No. 8 Nelaton catheters, it seemed a certainty that the second tube should also show if still present within the body. Skiagraphs were made of the entire abdomen, from the pelvis to the diaphragm, but no shadow of the second drainage tube was obtained. It was decided, therefore, that the tube must have slipped out and been lost in the dressings, notwithstanding the positive assertion of those in charge of the dressing of the patient to the contrary. The exploratory operation to search for the missing tube was abandoned, and the patient went on to an uneventful recovery.

The fact that the tube used for drainage in this particular instance produced such a distinct shadow with the X-Ray made it desirable to ascertain whether or not all of the kinds

of rubber drainage tubing in common use produced shadows that enabled them to be distinguished through a considerable thickness of tissue, and if not all, what particular kind of drainage tubing produced the most distinct shadow. For this purpose samples of pure gum plain white, corrugated white, and maroon tubing of the same size and thickness were obtained. These with a No. 12 Nelaton catheter were arranged side by side upon a cardboard and a skiagraph taken through the thigh of a boy eight years of age. In this skiagraph it was seen that the red catheter rubber gives a very dense shadow; the plain white, corrugated white tubing, cast a distinct shadow, the maroon a somewhat less distinct shadow, while the pure gum tubing produces scarcely any shadow at all. Since various metallic compounds enter into the composition of rubber tubing, it becomes a matter of interest to compare equally thick layers of metallic compounds and their solutions. For this purpose paper boxes having a depth of one centimeter were dipped in melted paraffin to render them impermeable to solutions, and filled with finely pulverized salts of various metals, and also $\frac{1}{8}$ gram molecule solutions of the same salts. These salts and solutions prepared by Professor Walter S. Haines and Dr. Frick were arranged in order upon a plate and exposed to the X-Ray. The negative shows that different metallic salts differ widely in their permeability to the X-Ray, and that this same difference extends also to their equivalent solutions. It appears also that the permeability depends upon the nature of the positive radical and varies inversely as the atomic weight of the metal forming the positive radical. This matter, however, requires further investigation with a large number of salts and careful tabulation of results before perfectly definite statements can be made. Although some work has been done along this line by Trowbridge and others, further investigation is necessary to clear up the matter definitely.

A comparison of the densities of the shadows cast by the salts and solutions shown in the skiagraph explains the variation in density of the various kinds of rubber drainage tubing. The bright red catheter and stomach tubing contained vermilion (mercuric sulphide), Hg S , and it will be seen from the skiagraph that the compounds of mercury cast very dense shadows. The maroon tubing contains vermilion (Hg S), or sulphide of antimony (Sb S), generally the

latter. The white tubing contains salts of lead or zinc, chiefly lead oxide (Litharge, PbO), and these metals cause the tubing to cast quite distinct shadows, though not so heavy as the maroon and red tubing. The pure gum containing no metallic compounds, or only traces of them, cast a very faint shadow when shown through any considerable thickness of tissue.

The practical conclusion to be drawn from the facts above stated pertains to surgical work chiefly. In the drainage of cavities or long sinuses, there will be a distinct advantage in the use of rubber drainage tubing that produces a distinct shadow with the X-Ray, especially in cases where there is any danger of the drain slipping into and being lost in the

cavity or sinus. For diagnostic purposes also there is a certain practical bearing, because red rubber catheter, stomach tubes, etc., passed into passages of the body, as the esophagus, for example, show in the skiagraph the extent to which the passage is patulous.

A regular meeting was held Dec. 9, President R. B. Preble in the chair. The following papers were read:

Pregnancy Following Operation in Which Right Ovary was Removed, Left Ovary Resected, and Round Ligaments Shortened.

Anna M. Braunwarth: Mrs. E. P., age 27; height, five feet, two inches; weight, one hundred ten pounds, came complaining of pain in the abdomen since the birth of her child seven years ago.

Family history, negative.

Personal history: She had been much troubled with constipation since marriage. She had one normal labor seven years ago. Three days after the birth of child, she was out of bed. Since then she had suffered with pain in the abdomen, especially at the menstrual periods.

The patient said she was sick half the time, and suffered much with headache, backache and bearing down pains. She began to menstruate at the age of seventeen. She was always regular, until one and one-half years before, the flow lasting five days; since then it had lasted six and seven days. The amount was large. During the previous year, she had been passing clots at each menstruation, and had noticed a very disagreeable odor.

On examination, I found tender and painful ovaries, and a retroverted uterus. I decided that an operation was indicated.

The patient entered the Woman's Hospital February 15, 1902. The usual preparation was given, as reported in my article, in the "Woman's Medical Journal," October, 1902.

The operation took place February 17, 1902. The diagnosis then made, was retroversion of the uterus, and cystic degeneration of the ovaries. A small piece of healthy ovary the size of a pea, was left after I resected the left ovary. I removed the right ovary, which was completely diseased, and shortened the round ligaments intra-abdominally. Her recovery was uneventful. The wound was dressed the first time on the seventh day, when the stitches were removed. It was dry, and well healed.

The patient sat up on the fourteenth day, and left the hospital the twenty-fourth day.

During her recovery, the highest temperature was 99°, pulse 90, respiration 20. Before the patient sat up, I introduced an Albert Smith pessary, to be worn six months.

In September, seven months after the operation, the patient called me, because of persistent vomiting, for which she had been treated, without relief, by a neighborhood physician.

On examining the patient I found her pregnant. I removed the pessary, and the vomiting immediately ceased.

During her pregnancy, the only inconvenience she experienced, was from immense varicose veins on the lower extremities.

On the sixteenth of March, 1903, thirteen

months after the abdominal section, I delivered her of a full term male child, which weighed eleven pounds. The labor, which was normal, lasted three hours.

On the thirteenth day after delivery, her temperature began to rise, and on the fifteenth day it was 104°. Examination showed retained secretions. After the uterus was dilated and curetted, the temperature fell, and the following day was normal.

The patient was kept in bed four weeks in order to insure perfect involution of the uterus, and to secure full benefit from the shortening of the round ligaments.

Since the delivery I have made a number of examinations, the last one having been made one week ago. Each time the uterus was found in the anteverted position. She is still nursing the child, and has not yet menstruated.

The literature on the subject reports pregnancy occurring after ovariectomy, and resection of the ovaries, but no mention of the shortening of the round ligaments is made, and furthermore, where a small portion of one ovary remains, it would seem necessary for pregnancy to occur soon after operation, before atrophy takes place, perhaps within six months or one year, according to the size and condition of the ovary left.

Summary:

1. Here is a case of cystic degeneration of the ovaries, and retroversion of uterus, one ovary resected, and the round ligaments shortened intra-abdominally.

2. Within four months after her recovery from the operation, she became pregnant, was delivered of a full term child, normal labor.

3. The vomiting of pregnancy ceased as soon as pessary was removed.

4. During her puerperium the temperature rose to 104°, due to retained secretions in the uterine cavity, and subsided after curetting.

5. The shortening of the round ligaments intra-abdominally, interfered in no way with carrying the child to term, or with delivery.

This case teaches us that resection of ovaries is not opposed to pregnancy, that cystic degeneration does not necessarily prevent normal ovulation and conception, and that a pessary retained as a uterine support, may prove to be an irritant, which will cause severe vomiting in pregnancy.

A paper entitled **The Theory of Squint** was read by Dr. A. B. Hale. The paper has not been received.

Discussion on Dr. Hale's Paper.

E. F. Snyder: While on the whole I agree with the points which Dr. Hale brought out in his excellent paper, there are some things, I think, which will bear a little investigation. In the first place, the doctor says that blind eyes do not squint. As a matter of fact, blindness is one of the frequent causes of squint. When an eye is injured, when it becomes amblyopic, it usually becomes a squinting eye. The eye most commonly turns out, and often we have that class of patients to deal with.

With reference to operative procedures, in a subject as large as squint, where there is such

a manifold etiology, I think it is unwise to lay down and be guided by any particular rule. I think the rational way to treat squint by operative procedures is to individualize each case. Every case must be studied. The etiology of cases is different. Stelwag has shown conclusively that in a large proportion of cases of convergent strabismus there is actual contraction of the internal rectus. Here we are dealing with a short, thick internal rectus, perhaps with a flabby, weak externus. Tenotomy in such cases is indicated, in addition, to advancement of the externus. We should have but poor results in the larger degrees of divergent strabismus if we should merely advance, and not tenotomize. To say that we should never tenotomize would be to deprive ourselves of one of the most valuable operations in properly selected cases. The thing to do is to take each case and study it; correct the refraction; study the case under atropin, and determine the binocular field of fixation, the excursion of each eye, the strength of the muscles of each eye, and arrive at rational conclusions. But I do not believe in laying down *a priori* rules and saying what we shall do, or that one operation is better than the other. Each operation must be used properly, and cases must be individualized.

Willis O. Nance: I congratulate the essayist on the practicability of his paper and on having presented it before this Society.

I thoroughly agree with him, as it was the teaching of Priestly Smith, who gave the subject a great deal of study, that the rational treatment of strabismus is early treatment. That point cannot be too thoroughly impressed upon the minds of the members of the profession as a whole and the laity as well. Personally, I regard the correction of refractive errors in children as a most important adjunct in the treatment of strabismus. This is a point that is overlooked to a great extent. There are men in Chicago who are treating these cases without making any effort at correcting refractive errors, entirely by surgical means.

Regarding tenotomy versus advancement, I agree with Dr. Snodacker. We cannot say that we must do an advancement and not a tenotomy in these cases, nor vice versa, because some of them will require the one, some the other, and some, both. Some of them can be entirely corrected by the non-operative methods alone. An advancement without a tenotomy in a great many cases is entirely wrong. I recall a recent case which was referred to me by Dr. E. A. Lyon, in which I am satisfied advancement without tenotomy would have been absolutely valueless, or nearly so. The non-operative treatment of strabismus is an all-important one, which consists of the use of a cycloplegic, a thorough search as to the refractive condition, and fully correcting it under atropin; correcting all astigmatism, as well as hyperopia or myopia, as the case may be; the use of the occlusion pad, and the stereoscopic exercises to which Dr. Hale has directed special attention.

In a paper read before the Illinois State Medical Society last year, I made the statement that I believe the thorough correction of the refrac-

tive error was not less important than a thorough knowledge and technique of operative procedures, and I fully believe it now.

Nils E. Remmen: I agree with the last two speakers (Dr. Snodacker and Dr. Nance) as to the different operations. Professor Grut, of Copenhagen, who is an eminent authority, uses these operations according to the indications presented in individual cases. He most frequently uses tenotomy for convergent strabismus, and advancement for divergent strabismus. I have followed his system since I began to do eye work, and I have seen no good reason to discontinue that practice. As Dr. Snodacker has said, the cases should be selected and studied carefully, and refractive errors should be corrected. The sooner the refractive errors are corrected the better.

Some oculists have laid great stress on amblyopia from non-use. As a matter of fact, there are many good authorities who deny any such thing. We know that a child may be born with a cataract, live to be sixty years of age, and then be operated upon for its removal, and immediately have good sight. There is a case of non-use. My experience is that when we have an amblyopic eye, as shown here, if the patient's vision is very much reduced, the correction of the refraction is not going to re-establish it to any great extent.

Walter M. Fitch: I would like to ask two questions. First, at how early an age is it supposed the function of fusion is established? Second, at how early an age can modern ophthalmologists successfully correct refractive errors?

Dr. Hale (closing the discussion): This is not the Chicago Ophthalmological Society, so I shall not discuss technical points. Of course, it would be wrong to say that advancement is the only operation, as I think my two cases show very well. In one selected case I did a simple tenotomy; in the other, a selected case, I did an advancement. I think modern operators have accepted the advancement operation as being more rational in its details than simple tenotomy. The correction of the refraction is the only essential, and in many cases will restore binocular vision, giving to each eye its proper visual power. All other means of treatment are important, but not essential. You can try all methods of restoring stereoscopic vision or fusion, by advancement or tenotomy, but if the refractive error is not considered there is failure in the treatment. That is a very proper addition to the statement I made, that even all eye doctors are not quite as conscientious in their treatment of squint as they might be.

As to the question at what period the fusion faculty is established, most oculists think up to the sixth year. Beyond that it is much harder to establish if it has been lost, and it becomes progressively harder to re-establish after it has been greatly depressed. Some enthusiasts in regard to amblyopia evanopsia claim that the fusion faculty once lost can not be re-established. I question that very much. Some enthusiasts go so far as to put glasses on babies when nursing. I have not had any

nursing babies that needed glasses, but I can readily understand there might be such, and if I ran across them I might put glasses on, but I have not seen the need of putting glasses on children under four, perhaps when they are beginning to read or study, and at which age the near point is much more exercised than it is in babyhood.

Home Treatment of Suppurative Ear Diseases.

Joseph C. Beck: The object of this paper is not to repeat all that can be found in the text-books or other literature on the subject, nor to go into the minutiae concerning the treatment of suppurative ear diseases, but simply to dwell on the most practical and important points, so far as the general practitioner is concerned. I want to be distinctly understood at the outset that it is not my motive to take the treatment which belongs to the physician and give it into the hands of the patient, but to teach the patient a proper method that he may assist the physician to obtain a better result than heretofore. It is accepted that two-thirds of the cases of running ears affect the poorer classes of people, and that most of these are clinically treated. It is also established that running ears, particularly those that the general practitioner sees first, the acute cases, should have daily treatment at first. This procedure is rarely carried out, for various reasons. In the first place, a busy practitioner has not and does not take the time to attend to the case daily. Secondly, people are not willing to go to the doctor's office every day, as they usually put it, just to have the ear cleansed, and, lastly, if they are clinical patients, who would usually be willing to have their ears attended to every day, cannot, because most of the clinicians only visit their clinics twice or thrice a week; consequently the treatment is not very satisfactory, and many a case goes on to the chronic stage, which could be healed up in the acute stage. It is therefore very desirable to have a method of treatment which can be partially intrusted in the hands of the patient.

In order to accomplish this, I have been using and experimenting with this method, that I find supplies these conditions very satisfactorily, and will now describe, or, rather, demonstrate, the same.

Before doing so, however, it will be necessary to make a simple classification of suppurative ear diseases, in order to show for which class this treatment is most suitable.

1. Acute otitis media, (a) serous discharge; (b) pus.

2. Chronic otitis media suppurativa, (a) with simple thickening of the whole lining membrane of the middle ear and the tympanic membrane; (b) with granulations, caries, and other complications, as antrum and mastoid involvement.

The treatment of suppurative ear disease is principally divided into, first, dry treatment; second, moist or wet treatment by means of syringes, or the combination of the two.

The majority of men believe that the dry treatment is the best, especially in the acute cases, and to those do I wish principally to call your attention. Permit me briefly to describe

how a case of acute otitis media suppurativa is usually treated by the patient and often by the doctor. The patient, usually a child, complains of severe earache, and in order to relieve this various substances are used, for instillation into the ear, as hot sweet oil, milk and bread, camomile tea and other infectious substances, until there occurs a spontaneous rupture of the tympanic membrane. It is, of course, these substances that caused the infection of the serous exudate, which is usually not infected. Gradle has written a very profitable article concerning the treatment of this earache, and recommends the instillation of hot carbolic glycerine, from 5 to 12 per cent solution, and since its adoption many of the secondary infections have been averted or mitigated.

Is the discharge already established, then follows the cleansing of the ear by means of improper and unclean syringes, with either too great a force or not force enough; very frequently too often washed and again not enough. The ear is not dry, simply wiped off on the outside, so that there is a constant moisture in the ear. Sometimes various powders are given to blow into the ear, which combine with the secretion and form a hard crust, that prevents the free drainage. In many cases nothing is done, just wait until the child outgrows the affection, and it is often that these cases do heal up simply because less interference was offered, and less chance of secondary infection.

The proper method is as follows: To relieve the earache use hot carbolic glycerine, 5 to 12 per cent, five to ten drops, repeated every fifteen minutes, or hot irrigations, with antiseptic fluids, and if necessary, make an early paracentesis, nay, incision. Then use a gauze drain, by placing a strip of sterile, soft, narrow gauze into the external auditory canal as far as the perforation, and loosely pack clear to the outer opening of the ear. Seal up the ear with collodion externally, which prevents the drying up of the secretion on the gauze, and so facilitates drainage. The gauze is in the first few days very much saturated, often after three to five hours, and then it should be changed and the process repeated, so it happens that a case at times requires two or three dressings daily until the discharge diminishes or entirely stops, and the condition is cured. Of course, the removal of contributory causes, as local naso-pharyngeal affection and general conditions, are to be combined in the treatment.

An entirely different proposition is the treatment of cases of acute otitis media suppurativa that cannot come or be seen more than once or twice a week, as, for instance, in the clinic. Should not these cases also have the proper treatment? This question brings me to the important point of my paper. Politzer says, if we had a method whereby the ear could be kept dry in the acute stages, we could avoid many a chronic suppurative case, and mastoid involvement.

Larimojez expresses himself in the same manner and asserts that the constant moisture in the ear is responsible for granulation formation, and so prevents proper drainage.

Richards takes the pains to teach his pa-

tients, whom he intrusts with home treatment, the anatomy of the crooked course of the external auditory canal, so that they may treat it intelligently, since most of the people believe the ear canal direction is straight inwards, and backwards, while it is the opposite—forward, downward and inward.

The method of treatment that I pursue is as follows: Say that the case is one where spontaneous rupture has taken place, or where the ear drum has been incised, and the ear is filled with a muco-purulent secretion or pus, I wash out the canal thoroughly with some warm antiseptic solution, as a two per cent carbolic acid, saturated solution of boric acid, permanganate of potash 1-1000, bichloride of mercury 1-3000, or formalin $\frac{1}{4}$ per cent. Then I dry out thoroughly by means of the gauze strips, as follows; which is the same procedure as packing the ear finally. If the patient is a small child, then it requires two persons, one to hold its head in position and a second to treat; but in older children and in adults only another, and oftentimes the patient himself, may treat the ears with satisfaction.

The patient sits near a table, with his right or left arm, depending on the ear being treated, on the table, the head resting on the arm, the forearm placed over the head, and holding the ear up and back, flat against the head. The ear having been syringed out, as said above, is now dried by means of these gauze strips, which are sterile, contained in this glass tube (Fig. 1.) especially constructed for this purpose, having a little beak at the top which acts as a retractor for the tragus, and also for the probe to get hold of the gauze. The gauze is prevented from falling back in the tube by means of this small rubber band. The probe is made of whalebone, somewhat flexible at the lower end, so

second fold is pushed gently down on top of the first, and a third, etc., etc., until the canal is completely packed, and cut off with properly sterilized scissors. The patient can be instructed to seal up with collodion, if desired. Some of my patients have carried out this treatment with a great deal of satisfaction. If, as usually the case, the discharge is marked and the gauze saturated, the patient is told to remove it and repack in the same manner on the same day. It is needless to say that attention has been called to the proper cleansing of the hands at each dressing. After two or three weeks of this kind of treatment we can expect that the discharge has ceased, and the ear practically cured.

Let us take a case of chronic suppurative ear disease where the whole lining of the middle ear and the tympanic membrane is thickened or granular. We will, for the first two or three weeks, irrigate the ear once or twice daily with antiseptic solution, drying and packing in the same manner, and when the patient comes to the office or clinic, wash out the middle ear by means of the Weber-Liehl catheter or Blake's, Hartmann's, or Dickerman's canula; inflate and use astringents. After three weeks, or when the discharge is much reduced, stop irrigation and only pack the ear with gauze, as in the acute cases, and you will find that many such cases get well, whereas the constant washing often keeps up the discharge.

In chronic suppurative cases where marked granulations are present, thick malodorous pus, with evidences by means of a probe of necrosed bone, and where the washings, sedimented and microscopically examined, show bone dust and cholesteatoma cells, we cannot expect any good results from this or any other but surgical treatment, and still these cases do better by the aid

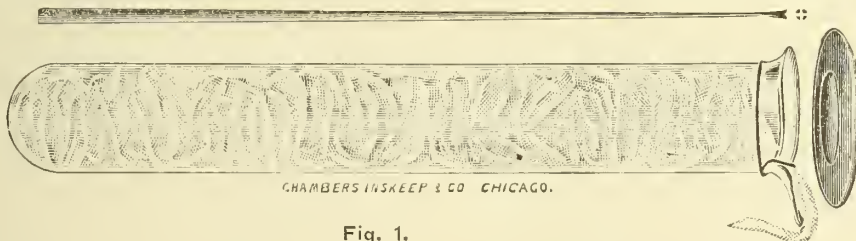


Fig. 1.

that it can follow the curved external auditory canal very easily, and glide by any obstruction offered to it; also will bend when it reaches the region of the tympanic membrane. The depth of the canal is indicated by a line, transverse, on the probe. The end of the probe has two or three furrows, as devised by Dr.

so that it may get a good hold of the gauze, and enable us to push it ahead easily and not pull it back on withdrawal.

The above mentioned beak of the tube is now placed into the canal in the region of the tragus, and the tube passes downwards and forwards over the cheek, held with one hand, retracting the tragus, and with the other hand the probe catches the gauze, and with one easy stroke it is passed to the bottom of the ear, indicated by the aforesaid line on the probe. Then a

of gauze drainage, associated with frequent washing of the attic, than simply using occasionally a washing of the ear.

My conclusions are the following:

1. That most individuals afflicted with suppurative ear diseases belong to the poorer (clinically treated) classes.
2. That two or three times a week treatment by the physician is not satisfactory, especially in acute cases.
3. That the constant moisture in the middle ear and external ear leads to granulation formation, decomposition, and necrosis.
4. That by means of intelligently instructed patients the treatment of suppurative ears can be markedly improved upon and better results obtained.

5. Patients and their immediate friends are easily instructed.

6. That by means of this specially contrived tube gauze, and probe, the patient may be safely intrusted with the treatment, since infection and injury are not liable to follow.

7. Without the aid of a head mirror, ear speculum, etc., one can pack the ear very easily in that way, and makes a very convenient appliance also in the office practice.

E. F. Snyder: I would like to ask the essayist if, after applying this little beak to the tragus, where the tragus has been bathed in pus, there is any means of cleansing the beak before the next wad goes over it, or does the next packing go over the beak without any further cleansing?

Dr. Beck (closing the discussion): In reference to the remarks made by Dr. Snyder, I stated in my paper that the patient is instructed in regard to the importance of cleanliness. He washes his hands and naturally every part of the tube; at each time the tube is bathed with pus, it is washed off with alcohol.

In reference to the remarks made by Dr. Holinger as to the first point, that gauze was not the proper thing to use in the treatment of acute ear diseases, I know from his own statements that he uses gauze very often in these cases, because he told me so last night. Again, the great majority of otologists use gauze in the treatment of acute cases, and why not the general practitioner if the patient is properly instructed? We do not see any more favorable results from the use of boric acid washes in clinical cases than from the treatment I have mentioned. I am speaking of the treatment of these cases from the standpoint of a clinician. If it were possible for me to see these patients every day, I would not give them such a contrivance to use. But I have studied this matter from a clinical standpoint, and clinicians do not see their cases every day, and there is no one at the clinic usually who will attend to them. At least, that has been my experience. I am satisfied, since I have been using this gauze treatment and this tube, my results have been better. I do not believe the average general practitioner pokes gauze into the ear, particularly if he is told to do the packing gently. It does not require a specialist to pass a strip of gauze into the ear. These cases are chronic because they have been washed improperly either by the general practitioner or the patient himself. Dirty syringes have been used perhaps, and a lot of water has been left in the ear.

As to the remarks of Dr. Holinger, regarding drainage, and the ear draining itself on the pillow, I have to say that the ear is one of the poorest cavities to drain. Anyone who is familiar with the anatomy of the ear knows that there is always more or less retention of foreign material in the ear. Gauze is used for the purpose of capillary drainage. We do not pack the ear when we use gauze as a drain.

With reference to the case Dr. Holinger spoke of, which was presented to the Chicago Laryngological Society, I saw the case. It was a chronic case, with acute exacerbations. In this case the handle of the hammer was short,

and we found it was partially destroyed, retracted, and adherent to the inner wall of the middle ear. There were distinct remnants of the tympanic membrane. The handle was drawn inwards and apparently adherent to the promontory of cochlea. There is no gauze or cotton which would cause destruction of that kind. It was a chronic case, with adhesion of the short process and handle of the hammer to the inner wall of the middle ear. I am speaking about gauze packing, as I would not think of packing cotton in the ear.

Some Observations of Practical Interest on Colonic Lavage.

Milton H. Mack: The uses of this important therapeutic measure have been not only overlooked, but neglected to a certain extent by the profession in general.

The reasons for this are three in number:

1st. The objection on the part of the patient.

2d. The objection on the part of the physician.

3d. The want of facilities for the proper administration.

All of these play an important role.

In the first the patient objects to the trouble in taking it, if done at home, and to the exposure, especially if the patient is a woman, if it is given by the physician. The exposure should not be considered under any circumstances as there is in reality practically none.

In the second, it must be admitted that the physician experiences some disagreeable features in the giving of colonic lavage, aside from the time occupied in administration, which is from 15 to 25 minutes not including the time necessary for preparation.

The third is probably the most important of all, as it is an almost absolute necessity to have certain facilities for its proper administration. If taken at home by the patient, we have no assurances that the patient is following accurately our direction. If given at home by the physician he is handicapped by the want of the necessary conveniences.

Furthermore, it is positively impractical to give it in the office, unless a room is especially provided for the work.

Colonic lavage, as its name indicates, is a washing out of the colon. It may, also, be the means of making local applications of medicines. A number of different tubes are used for this work, but my preference is the ordinary flexible rubber Colon tube for with this it can be passed to almost any portion of the large bowel.

The technique is simple. One of the three important positions are utilized at the discretion of the operator.

Boas advocates the placing of the patient on the side with the hips elevated.

Others use with good success, in certain condition, the Knee Chest position. Both of these I have tried and found unsatisfactory for practical routine work.

For my own use I prefer the dorsal position in nearly all cases. I find it the best.

The patient should be placed upon a table especially prepared for elevating the hips.

The body lies on the back with the hips elevated at an angle approximately of 45° or 50°.

The stirrups in which the feet rest are also raised with the end of the table, thereby giving the patient as comfortable a position as possible.

The colon tube is then passed into the bowel. It is not necessary that it should enter more than a few inches.

Many physicians claim that it is necessary for the tube to pass the Sigmoid to get good results. I have demonstrated to my own satisfaction, that this is not so.

It is possible to locate the water in the ascending Colon when the tube is placed just inside the sphincter. I have experimented many times in this, and seldom failed to find it as stated.

The water which has been previously prepared is now allowed to flow into the bowel.

The temperature of the water varies with the case. It may range from ice water to a temperature of 130° F. Hotter than this it is not well to use in the bowel. Hot and cold water may also be used alternately.

The amount of water allowed to flow into the bowel depends upon the temperature. At an ordinary temperature any where from a quart to 3 or 4 quarts can be passed in, but large amounts in most cases are unnecessary.

The giving of lavage, with water at a high temperature, say from 120° to 130° calls for an entirely different procedure, as the patient is unable to retain a large amount.

After the tube has been placed in the bowel, the nozzle of the irrigator is attached and from 8 to 10 or 12 ounces allowed to pass in. Rarely, is a patient able to retain more than this, without pain.

Then the nozzle is disconnected and the water allowed to siphon out. This procedure is repeated any number of times over a duration of 10 to 25 minutes. The patient is generally the best judge of the amount of water to let in, at any one time, but should you for any reason desire more, let the patient breathe deeply or otherwise it may get beyond his control and suddenly return along side the tube.

Some authors advise the use of hot and cold water alternately. I personally prefer the continued use of the hot water in nearly all cases, especially chronic catarrhal and atonic conditions.

If necessary the treatment can end by douching the bowel with cold water. This acts as a stimulant to the patient if the heart shows any signs of weakness.

As it is out of the question to have the patient personally use the method just described, it may be necessary to occasionally resort to the other methods. However I do not like them in chronic cases for the following reasons:

1st. The bowel is stimulated by the weight and bulk of water present and not as in the latter method, by the heat.

2d. The temperature of the water is necessarily much lower, as it is almost impossible to

inject a large quantity at a high degree, and as a result the stimulation is not so marked.

3d. The amount of water generally used has a tendency to over distend the bowel and if continued for any length of time is liable to cause a parietic condition of the bowel.

4th. Probably the most serious objection is that when large enemas are once begun, the bowel soon depends upon them, which is not the case with small hot injections often repeated.

For cleansing the bowel on one or two occasions the large enemas are suitable and no objections can be offered to their use.

However, Blake in his work on Constipation says that a large injection should never be given, if any great amount of fecal material remains in the bowel, on account of the danger of absorption.

I have never experienced any difficulty from this source in any of my work. He also states that a small injection be given first, then gradually increased until a large amount can be given. I cannot help condemning this statement. For while there is no denying the fact that temporary good does result, in certain cases from large injections, they should never be continued over any considerable length of time, owing to the future deleterious effects.

Local Effect: The local effect of an injection depends upon the temperature of the water. A moderate temperature 65° to 80° F. will cause a relaxed condition of the wall. A cold injection causes stimulation, but is also liable to cause pain.

A temperature from 80° to 110° F. will cause a mild stimulation with slight hyperaemia. From 110° to 130° F. there is

1st. Considerable hyperaemia of the mucous membrane.

2d. An increase in the secretions.

3. It has a markedly stimulating effect on the bowel itself. Anything over 120° F. causes a more or less tetanic condition, which give a sensation of griping or intense desire for stool.

These spasmodic contractions are so violent as to cause a very perceptible motion of the tube, an intermittent return flow, and often will pocket the water not allowing any return at all for some time.

General Effect: The ordinary large warm injection has little or no general effect other than the sensation of the bowel movement or under certain circumstances may cause a slight general weakness following the movement. But when the high temperature, from 120° to 130° F. is used, the first effect is usually noticeable in the feet, it being a sense of warmth and tingling following this it is in the hands and then the whole body.

As a rule, the patient perspires very freely before the end of the treatment.

The pulse will increase in frequency from 5 to 30 beats per minute, but the volume and rhythm, so far as I can observe, are not changed. Occasionally the patient after the treatment will feel weak and exhausted, finding it necessary to lie down for a few minutes, but aside from this, I have never noticed any deleterious effect.

This can be prevented by finishing the treatment with a cold injection.

Indications:

Constipation. The most common indication for lavage is that of constipation. The treatment of constipation by lavage differs according to the Etiology. If the condition be one, only of physiologic changes due to atonic conditions, the best results are obtained by the use of small quantities of water, oft repeated, at a very high temperature. This has a tendency to stimulate peristalsis without increasing the atonic condition by over distention from the weight of water.

This is also true of those cases of constipation, due to catarrhal conditions of the bowel, as colitis or enterocolitis. In these cases the action is two fold, viz.: the stimulating effect upon the bowel and the application of heat direct to the diseased surfaces, thereby causing a decrease in the inflammatory condition of the bowel.

I have invariably utilized this treatment in all cases of constipation resulting from such diseases of the stomach as gastritis, dilatation and Hyperchlorhydra, etc. It is especially valuable in these cases. Of course the fecal matter in constipation resulting from impaction stricture and the like will be removed quicker by larger amounts of water at a much lower temperature. In 31 cases of constipation treated, due to atonic and catarrhal conditions, I can report cures to 24 cases. Improvement in 5. No relief in 2.

In three of these cases I found it necessary to use cathartic and then only for a short time. In cases of mucous colitis I am able to report good results, but feel the treatment must be continued at intervals for some time before permanent results are obtained.

Diarrhoea: The next condition is that of diarrhoea. Lavage gives better results in those cases which are due to the diseases of the colon, rather than the small bowel. It may be used in either the acute or chronic forms of diarrhoea. It is especially useful in stercoral diarrhoea, that form in which diarrhoea exists with constipation.

In diarrhoea due to tubercular conditions much aid can be given the patient.

I have seen two cases which made such an improvement that I would like to make a short report of them.

The first, that of a young man, 24 years of age, had from 5 to 8 stools daily, was sent west, and after six months in Arizona returned in about the same condition.

Lavage of the colon was instituted for several weeks, when the stools dropped to one or two daily. The patient gained in weight and strength and made a general improvement. Tubercle Bacilli was present in the feces. As this was only a few months ago, I am not prepared to say what the outcome will be.

The second case, also a young man, aged 20 years, was under my care for only a few weeks, when the family suddenly decided to have an operation done for chronic catarrhal appendicitis. Operated against my advice.

Appendix removed and found normal. The

patient rapidly lost ground and died just a few days ago from intestinal tuberculosis.

While under my care gained in weight, strength and appetite. Stools dropped from 4 and 5 to 1 and 2 per day. Looked better and felt better in every way, but gain was not fast enough to suit family.

There is one other important point which must not be overlooked along this line, and that is the help we may obtain from this measure in the diarrhoea of children. In case of cholera infantum and acute dyspeptic diarrhoea, it is not uncommon to see a very perceptible drop in temperature follow one or two flushings of the bowel in these conditions.

Dysentery: Attacks of acute catarrhal dysentery are not shortened perceptibly by the use of lavage. I have tried it in these cases, both with the water at high and low temperature. In Amoebic dysentery, injections of quinine 1-2000 or more are much vaunted, and I think, considering the results obtained, properly so.

In the chronic dysenteric conditions much good can be accomplished. Here again I like to use the high temperature, with repeated injections of small amounts. These injections can also be made the medium of local medicinal applications, such as argemum nitrate, alum, boracic acid and other astringents.

But these cases should be taken only with the understanding that to get the results treatment must extend over at the least consideration four to six weeks. If the patient is willing to do this, it is possible to extend the hope of recovery.

Typhoid Fever: Just before giving up my general work, I tried treating two cases of typhoid fever by daily irrigations of the colon, with only a small amount of salol by mouth. As I have had no opportunity to follow this up, I am unable to draw any deductions, therefore, but of the two cases stated I will make the following reports:

Case 1. Lavage badly borne after third day had to cease entirely after seven days, but temperature raised from one to two degrees after irrigations ceased. Patient made a good recovery.

In the 2d case irrigations continued 12 days. Fever only twice above 103°. No discomfort from enemas. Slight delirium only three times during attack. Uninterrupted recovery.

Water used was never above 100° or 105° F., causing little or no tetanic contraction, a small amount only being allowed in the bowel at any one time. This, I think, is rational therapy, as it keeps the colon clean.

Hepatic Atrophy: In that form of chronic hepatic atrophy due to insufficient nutrition as a result of stomach or intestinal trouble, I find excellent results from lavage of a high temperature. This condition is much more prevalent than is supposed. I find it in about 70 or 75 per cent of all cases of gastric (intestinal) disturbances. While I have never been able to see a complete restoration in size in these cases, I have been able to make out an increase and also to give my patient considerable relief. This cannot be accomplished in a few treatments, but takes several weeks.

In cases of sigmoiditis, proctitis and peri-

proctitis best results are obtainable by the high temperature injections.

Headache due to gastro intestinal disorders: Headache also claims attention, and I have attained excellent results in several cases of so-called sick headache due to gastro intestinal absorption, of toxic substances. Two of these cases had suffered from headaches for years, one for 18 years and the other for about 10 years. The attacks would last from 12 to 36 hours, occurring every week or so.

One case dismissed eighteen months ago and the other thirteen months ago with no return. Whenever these cases present themselves to the practitioner it is well to determine if they are of gastro intestinal origin, as so many of them are, and treat them accordingly, with lavage. Neurasthenic headaches do not as a rule give good results from lavage. In diseases aside from those found in the digestive tract—colonic lavage is also useful.

Kidney Lesions: My attention was called to the effect of lavage on the kidneys in one of the first cases I ever treated by lavage, from the fact that in two or three treatments the urine was changed from a foul smelling article, with large deposits, when allowed to stand, to a practically clear normal condition. There was also an excess of phosphates, which soon disappeared. Soon after this I had an opportunity to treat a case of temporary albuminuria (2d attack) in which oedema of the eyelids and feet was present. Nitric acid showed about 70 per cent per volume of albumen. Albumen disappeared after 3d treatment, with lavage at a high temperature. In cases of chronic nephritis I would advise the use of a higher temperature than is ordinarily used in these cases. I think quicker and better results can be obtained, for the renal activity is much more marked.

If suppression has taken place, the kidneys can be aided greatly, not only by the local effect of the heat on the kidney, but by the diaphoresis following the administration.

Nervous Disorders: Under the head of nervous disorders, I wish to mention that Dr. Moyer, of this city, reports three cases of insanity proceeding from the colon relieved by flushing of the bowel. I myself have only seen one case of this kind, and that during my service as hospital chief. These cases were treated by large enemas until the entire fecal mass was removed, when the patients began a rapid improvement and made an uninterrupted recovery.

In conclusion, I find that about 85 per cent of chronic cases give best results from the high temperature injection, while a far less percentage of acute cases are adaptable to this mode of treatment.

Discussion.

Homer M. Thomas: I do not desire to speak on the subject of colonic lavage from the standpoint of either a specialist or as one who has had much experience in diseases of the colon. I was recently the attending physician in a case of colitis and perityphlitis. The condition was an aggravated one and the necessity of operative interference was raised. A distinguished sur-

geon was summoned in consultation and suggested that relief of the mechanically distended colon and reduction of the abdominal distension might be secured through colonic lavage. It was suggested that the colon might be thoroughly cleansed of its decomposing contents by the use of colonic lavage, consisting of equal parts of common molasses and milk, heated to a temperature of 100°. I was somewhat surprised at the therapeutic suggestion which the use of this mixture caused, and received it with considerable skepticism. I asked the surgeon, probably the most distinguished in the northwest, as to what the therapeutic action was of a mixture of equal parts of ordinary molasses and milk administered as a colonic lavage, upon a condition such as was presented in this case of colitis and perityphlitis. He most frankly admitted that he did not know how this mixture acted, but that it did, in nearly every similar condition, act effectively in cleansing the colon of its diseased products. He also stated that it was a treatment most successfully used in such cases by Sir Andrew Clarke, a distinguished surgeon of London, and that in his hands it had almost invariably afforded relief in cases of mechanical distension of the colon. It has been experimentally demonstrated that the capacity of the colon to retain a medicinal mixture for purposes of lavage is three pints. I applied this treatment by means of a mechanical pump, and the effect was entirely successful, as well as gratifying. A large accumulation of dried feces and highly decomposed gaseous flatus, was removed. I was not successful in having the full capacity of the colon, three pints, retained, but probably a pint and a half of the mixture was retained for about five minutes. During the course of the illness of this case, colonic lavage was instituted five times with the desirable result that the symptoms of colitis and perityphlitis entirely disappeared. The result was extremely gratifying in every way, and the necessity for operative procedure was obviated. The case referred to was that of a distinguished titled foreigner, and attracted some considerable medical as well as public interest, at the time. I feel quite confident that had not colonic lavage been instituted in this case and the before mentioned mixture used, that in all probability an operation would have been necessary to effect a cure. The avoidance of an operation in this case through the efficacy of the treatment instituted, namely, colonic lavage, I feel is distinctly more of a medical triumph than had recovery been brought about through the necessity of an operation. I wish, therefore, to record my pleasant impression of the efficacy of colonic lavage in a recent case of a severe attack of colitis and catarrhal appendicitis.

J. Rawson Pennington: As has been stated, the use of water, hot or cold, in the bowel is not new; neither is the technique, as presented to us this evening by the essayist. Yet, I am sure that its therapeutic value is not appreciated by the average doctor, and therefore I consider the paper a timely and valuable one.

Colonic lavage, when indicated and properly administered, especially, in combination with kneading massage, may be productive of great

and lasting good. But, mark you, when not indicated and improperly administered, may be productive of great and lasting harm.

I use, in my practice the same technique as that advocated by the essayist, with this exception, I flex the thighs on the abdomen, the legs on the thighs and support them by leg rests; then introduce into the bowel myself retaining rectal tube. You see (exhibiting the tube) it has a bulbous enlargement near the distal end, and when this enlargement is passed through the levator and zone it prevents the tube slipping out, an advantage appreciated by those giving colonic lavage.

A word or two in regard to the treatment of constipation by this method. The essayist reported 29 cases, and of this number 21 recovered and four were improved. This is a good record. Constipation, however, is not a disease but a symptom and the disease causing the constipation must be determined before the prognosis can be thought of. Constipation is no more a disease than pain, or fever is a disease, and who would think of treating all cases of pain with opiates, or all cases of fever with quinine? Neither should you expect to remove the cause of all cases of constipation by injections of hot or cold water.

The essayist also mentioned cases of constipation due to catarrhal gastritis and dilation of the stomach, which he had successfully treated with colonic lavage. If I were treating a case of constipation due to catarrhal gastritis or dilation of the stomach, I would direct the treatment more especially to the stomach, would put the hot water in it using my intragastric bag, so that the water would not come in direct contact with the mucous membrane of the stomach. And I believe the essayist would do the same thing, as I am sure that this statement was an oversight on his part. In cases of dilation of the stomach, as it is a muscular organ, I would employ intragastric massage by means of hot air. Here, again, it would be necessary to employ the intragastric bag and, I would use again preferably, my own, because it is so constructed that the stomach tube and bag always maintain a definite relation to each other whether the bag is empty or distended.

Dr. Mack (closing the discussion): In regard to the cases referred to by Dr. Moyer, I remember very well one case when I was an interne at the hospital, which reacted, as he says, to this treatment. It is the only case with which I am familiar, where colonic lavage relieved the mental aberration.

This treatment is not a panacea for all ills. In the paper I considered only three different diseases aside from those due to conditions of the alimentary tract.

I did not mention massage, but I should have mentioned it as one of the important adjuncts in the treatment of these conditions. It should be used in every case and I do use it.

A question was asked as regards the method of introducing the water into the bowel. I thought my description of that was clear. It is simply one of gravity, and water can easily get into the bowel.

I did not say constipation was a disease. I realize the importance of not calling it a dis-

ease as well as anyone else, but it is a symptom of a great many diseases, and if you relieve the disease you relieve the constipation. Furthermore, I stated the cases which I had treated were due to atonic conditions of the bowel, and inflammatory conditions of the bowel, as mucous colitis, and enterocolitis. I do not pretend to relieve conditions that are due to malpositions of the bowel or strictures or anything of that kind. You cannot do it with colonic lavage, nor with anything outside of surgery.

In regard to constipation being associated with diseases of the stomach, I certainly would direct my treatment towards the stomach in catarrhal gastritis or dilation. But when you have an irritated colon, one that is diseased, accompanied with dilation of the stomach, or gastritis, it is wisdom to direct a certain amount of your treatment to the colon, and I know that I get good results in these cases by so doing.

A word or two in regard to the time consumed in giving colonic lavage. You can take as much time in these cases as you desire, but my experience has been in treating a good many of these cases, that the time required is not over fifteen to twenty or twenty-five minutes at the outside. I see no necessity of putting in forty-five minutes or an hour in the use of colonic lavage when it is not required.

It is true, this treatment is not new, but there are some things which we should consider occasionally even if they are old. But, as Dr. Montezuma has said, physicians should educate themselves to give lavage properly.

Report of a Case of Perforating Gastric Ulcer in a Male Aged 54, with Presentation of Specimen.

James B. Herrick: This is a specimen of ulcer of the stomach obtained from a man aged 54, whom I first saw about the middle of last July. The history of the preceding years was an uneventful one except that ten years before he had suffered for several weeks from pain that he attributed to sour stomach with acid eructations. In June of 1902 he again suffered from the same trouble for sometime, and in July of this year he was taken with the same illness. This time the trouble did not disappear, however, and in August his complaint was of severe pain coming on about three hours after eating. He described the pain as being a burning and gnawing; sometimes there were acid eructations. He found that frequently he could relieve the trouble by drinking milk. Vomiting had occurred once or twice a week, he sometimes forcing himself to vomit in order to relieve the pain. He denied ever having vomited blood.

For various reasons no examination of the stomach contents was made at this time and the patient was put tentatively upon a treatment that would be suited for hyperchlorhydria; the periodic pain coming on after meals, the acid eructations, the relief afforded by milk making one think of hyperchlorhydria. This treatment gave him much relief for a week or more, but later his physician telephoned me that his patient had vomited blood and that the stool was tarry. The patient was then placed in my care in the hospital and was at

once put on rectal feeding. A test meal was given and the stomach tube, carefully passed, brought up stomach contents that fitted in with the diagnosis of ulcer; a large amount of hydrochloric acid was present.

The pain which the patient had suffered at his home following the hemorrhage, promptly disappeared under rectal feeding. The case went along beautifully until the fourth day when the patient had a sudden, severe pain in the epigastrium. The pulse jumped to 120; there was extreme tenderness in the epigastrium; the muscles were rigid, and the leucocytes, which had been counted only four hours before, increased from 6,000 to 12,700. Perforation of the ulcer, was, of course, looked upon as having occurred. A surgeon was immediately summoned, the abdomen was opened and a tear through the ulcer on the anterior wall of the stomach close to the pylorus was sewed up. The patient died the next morning. The autopsy showed that the stitches did not hold well.

The autopsy was held within an hour after death. There was found an acute perforative peritonitis; numerous old adhesions between the lesser curvature of the stomach and the liver, and close to the pylorus a large ulcer $3\frac{1}{2}$ by $7\frac{1}{2}$ centimetres, with raised, indurated edges and a clean base of scar tissue throughout most of its extent. The ulcer rode on the lesser curvature of the stomach, saddle fashion, extending three-fourths of an inch over the anterior and posterior surfaces respectively.

There was no pyloric obstruction and the stomach was not enlarged. The other findings were of no interest from the point of view of the ulcer. There was no regional enlargement of the glands.

This case presents a few points of interest. In the first place, the patient was a male and was 54 years old. The conception we so frequently get of ulcer is that it is a disease almost peculiar to chlorotic girls; but many cases occur in males during adult life and even in old age. Then, there is another feature that is of frequent occurrence and that is the relapses. The extent of this ulcer and the large amount of scar tissue show that it is an old affection. To judge from the symptoms the trouble began ten years ago; then there was a period of dormancy; then it flared up again in 1902 and again in 1903. This is often seen in ulcer. I have seen it in several instances in adult males. I have now a man aged 49, under treatment whose history dates back four years and shows several relapses. In another case, a man of 70, the history of repeated attacks extended over many years. Finally at the age of 70 there was a perforation; at one time it seemed as though the case must be one of carcinoma, but the autopsy failed to show anything that could be called carcinoma, merely the ulcer with abundant old scar tissue showing a process of long standing.

The size of this ulcer is worthy of note, being larger than most of them.

Another point is the time of the occurrence of the pain. We too often get the impression that in ulcer, pain should appear almost im-

mediately upon taking food, but that is by no means the rule; there are many exceptions. In ulcers near the pylorus, where the musculature is in active contraction some time after taking the food, we find not infrequently that the pain is delayed for two or more hours after each meal. Then again, the taking of food really lessened the pain in this case. The taking of food dilutes the gastric juice and at the same time serves to neutralize the excess of acid. Particularly, giving to the patient a proteid diet gives great relief from pain, hyperchlorhydria being thus overcome.

The rarity of vomiting is also worthy of note.

Sections show more or less proliferation down into the muscularis with active karyokinesis. Dr. LeCount who has examined the specimens is inclined to believe that this represents an ulcer in the transition stage towards carcinoma.

 * Chicago Laryngological and Climatological *
 * Association. *

Regular meetings are held on the fourth Tuesday of each month from September to May.
 Membership 50.

Officers.

President Norval H. Pierce, 31 Washington st
 Secretary John Edwin Rhodes, 100 State st

A regular meeting was held November 24, 1903, with the president, Dr. Norval H. Pierce, in the chair.

Dr. John Edwin Rhodes reported a case of **Spastic Dysphonia**.

This term is applicable to any neurosis of the larynx which is characterized by difficulty in phonation. It is, so far as the larynx is concerned, a local condition, rather than a disease, the lesion for which it is a symptom, being one of the nervous system, and usually situated in the brain. It is a neurosis in which there is a spasm of the larynx, and a failure to properly co-ordinate its muscular action on attempts at phonation. In these cases, on an inspection of the larynx, we find a normal condition, so far as appearances are concerned while the respiratory function alone is taking place. However, as soon as the impulse to the muscles of phonation is sent along the efferent nerves, there is an immediate spasmodic action of the larynx apparent, the voice being broken in a characteristic manner, but, as soon as the attempt ceases, the normal action of the larynx in phonation, is resumed.

In 1898, in a paper read before the American Laryngological Association, on "Spasm of the tensors of the vocal cords," I gave the histories of five cases, observed by Dr. Ingals and myself. In only one of these cases was that classification so applicable as in one I have recently had an opportunity of studying carefully, and in that one the records were very meager. It is undoubtedly a rare affection, as McKenzie had seen but 13 cases, although Lennox Browne believed that it was found much more frequently, a statement with which most observers do not

agree. The case had some interesting features and it seemed worth while to place it on record.

C. A. H., single, 43 years of age, farmer, a resident of a neighboring state, was referred to me September 14, 1903, and gave me the following history:

His speech had been affected for 23 years, but had become worse in the last five years. Early in the history of the trouble there was an almost total loss of speech. The trouble seemed to begin rather suddenly as a cold with loss of voice. As this was not restored after a time, he and his friends became alarmed. At this time he consulted the late Dr. Jewell of this city who gave a very unfavorable prognosis, limiting his probable survival to a few years only. His family history shows the death of his mother from paralysis, following typhoid fever, at 73 years of age. He is of a nervous temperament, and has had several nervous breakdowns in the last few years. He is inclined to be morbid and constantly worries over his condition. He is weak and for the last year has had very little endurance. There is a considerable loss of weight, from 140 lbs., a few years ago and 125 lbs., two years ago his weight has declined to 119 lbs. He is rather anemic, having a pale, sallow complexion. His pulse is 72, and slightly unsteady. His temperature is, a part of the time, above normal, reaching 100.2° F. There is no cough, but some hacking and clearing of the throat. The appetite is good, but digestion is poor, and he complains of a "miserable feeling" in the bowels, pretty constantly. He is habitually constipated, and a constant user of cathartics.

On attempts at phonation there is at once a marked tremulousness of the voice. The words are broken and vibratory, more so at the very beginning of efforts to speak than when he has gotten well started, then the words are uttered more easily, some words having an even, clear tone, but most of them characterized by tremulousness, such use of the voice causes fatigue. He says that when he is excited or a little embarrassed, or tired the trouble is more marked. Any position of the head or change in pitch or force of the voice makes no perceptible difference. One marked characteristic is that the whisper voice is perfectly normal, and he can use it without fatigue for any length of time. He can sometimes read aloud easily for sometime without fatigue, or marked breaking of the voice. There has never been any dyspnoea. He has had nasal catarrh since childhood.

An examination shows a marked "chicken breasted" chest. The heart and lungs are normal, and liver and spleen are not palpable. There is a large opening in the cartilaginous septum, and the cavities are free. He thinks this perforation occurred in childhood, and was the result of catarrh. He denies having had syphilis and there are no evidences of such an infection. There are a few enlarged follicles on the pharynx, and some diseased crypts in the tonsils. The laryngeal structures show no evidences of inflammation. On attempts at phonation the abduction is not delayed, but on the attempt at verbal utterance the tremulousness of the cords is at once apparent. Tension is

held for an instant only, when there seems to be relaxation allowing a fuller column of air to pass, throwing the vocal cords into vibration in their entire length. The arytenoids seemed fixed with no relaxation at all while this condition of tremulousness is observed. In the utterance of a single and prolonged note there seems to be an uneven escape of the air column, an intermitting tension and relaxation. This condition is not apparent when he whispers. There are no evidences of this tremulousness elsewhere. There is none of it about the head, neck, or extremities and it is not in evidence except when speaking. The reflexes are normal.

The thyro-arytenoids have been called the "internal tensors of the vocal cords." The motor stimulus is received through the recurrent laryngeal nerves. The muscular action at fault in this case seems confined to these muscles. The external, or real tensors of the vocal cords, the crico-thyroids, are not visibly affected in his phonatory efforts. His speaking voice, however, has impressed me as being modified by the muscles of expiration, particularly by the diaphragmatic control of the air column in expiration. Careful observation convinces me that the tremulousness accompanying the breaking of the voice is in the thyro-arytenoidei, chiefly, if not entirely, and that the case is such a one as McKenzie describes as a "spasm of the tensors of the vocal cords."

He was a masturbator from 14 years of age till 8 years ago, when, at his own solicitation, castration was performed, and the habit cured. This habit may have been an important factor in the etiology of the affection.

Discussion.

William L. Ballenger: I want to report in this connection a case which I saw about fifteen years ago, which was similar in some respects to the case reported by Dr. Rhodes, and in other respects dissimilar. The patient was a woman, 30 years of age, who had been attending the Sankey and Moody revival meetings at Indianapolis. She was one of the singers on the stage, and following this series of meetings and her extended efforts in the musical line, she developed spasm of the vocal cords quite similar to the case that has been described. The peculiarities in her case were that the spasms would occur only during attempts at singing, and later on, I found that even though she did not attempt to sing, but simply thought music to herself, it would bring on the spasms just the same as during actual attempts at singing. I diagnosed the case at that time as one of Hyperkinesis of the larynx. I have often thought of it as an interesting case, and one which illustrates how the thought of music develops the spasms just as much as actual attempts at singing would do. She made a complete recovery in about six months.

E. Fletcher Ingals: These cases of spastic dysphonia are interesting, but unfortunately very unsatisfactory cases for the physician. I have seen a number, possibly six or seven. The author of the paper refers to five of my cases. I only recall at this moment two; they were both in ministers who were past middle life. They

had been under similar conditions of overwork; one went from bad to worse, the nervous symptoms increasing as the disease progressed. Later he had marked stammering making it difficult to utter many words. I do not know about the progress of the other case, but I hardly think there was any improvement.

The prognosis in these cases is essentially bad. I do not know of any cases that have been improved by treatment.

The disease is not frequent. From my own experience, I should say that it occurs in only one in six or eight hundred cases of laryngeal affections, perhaps one-eighth of one per cent.

Wm. L. Ballenger: I would like to say that the woman whose case I have reported voluntarily regained her voice in about six months, if I remember rightly, without any treatment having been given.

Norval H. Pierce: I think one of the cases referred to by Dr. Ingals was that of a prominent clergyman here. He went from bad to worse, until he had to give up his position in the church. The spasms, which apparently began in the intrinsic muscles, extended to the extrinsic muscles, so that the cricothyroideus muscles would contract, pull the thyroid violently downward, and thus put the cords upon a tremendous stretch, so that the most striking impression one would get on laryngoscopic examination would be the great length of the vocal cords. The omohyoid and the sternohyoid and thyroid muscles were involved. Later the diaphragm became spasmodic, so that he had to desist from speaking entirely on account of want of breath and from spasm of the diaphragm, causing urgent dyspnea. He does all of his speaking at present on pieces of paper. He is losing flesh rapidly, and all of the symptoms are growing worse. The heart is dilated on both sides, right and left, and his whole life is miserable.

The most peculiar feature in this case is this, that by the insufflation of fifty per cent of cocaine and sugar of milk into the nostril his voice returns; he is able to conduct service or preside at a meeting with the greatest facility, but the moment the cocaine wears off the spasms return.

John A. Robinson: During the reading of Dr. Rhodes' paper, the thought occurred to me that probably some of these cases might be due to intrathoracic disease. At the West Side Branch of the Chicago Medical Society the other evening, Dr. Preble exhibited a case of aneurysm of the aorta in which there was present almost the same spasmodic condition of the larynx as has been detailed in this case, in addition to attacks of spasmodic dyspnea. The dyspnea was very intense. In view of the fact that no real explanation seems to have been offered why these cases occur, may they not be due to an undiscoverable aneurysm, on account of the fact that the left recurrent laryngeal nerve enters the thorax, winds over the arch of the aorta, and is distributed to the laryngeal muscles, the intrinsic muscles particularly. That question constantly recurred to my mind while Dr. Rhodes was reading his paper.

Dr. Joseph C. Beck reported a case of *Lingua Nigra*.

This man, Mr. T., 34 years old, with a history of a muscular rheumatism for several years. Family history negative. Venereal history negative, so far as syphilis is concerned. History of childhood, usual diseases.

Present history: About a year ago he noticed a peculiar scratchy feeling in his throat, and near the back of his tongue, which caused him to cough, particularly when he took the recumbent posture, and on examining his throat he noticed on the back of his tongue a dark mass, which he attempted to wash off, and not succeeding pulled off pieces by a spoon, but they soon returning in the same location. He consulted a physician, who told him that nothing could be done, but to take something to relieve the scratching, which was Smith's cough drops. These always relieved him.

About five months ago the man had an acute infection which his physician diagnosed as la grippe, and gave him some internal medication, which I examined, and found to be cascara sagrada, which, he claims, removed the whole mass entirely. Three weeks after he noticed its recurrence, and two months ago he consulted me as to the relief of the irritation in his throat, which now the tablets refused to do.

On examination, I found a dark mass of a dirty brownish color, the broadest at the base of the tongue, in the region of the circumvallate glands, gradually tapering down to a point at the anterior one-third of the tongue, making the mass triangular, with its base to the base of the tongue, and its apex towards the tip of the tongue, being half an inch wide at its broadest part. On attempting to remove the mass, some difficulty was experienced, but I succeeded in pulling a few threads out, and examined them microscopically. I found that the mass was composed of a number of filamentous hairs, dark in color, having all the appearance of hornified epithelium, which refused to take the stain readily. There were very few other microorganisms to be found.

There was no treatment instituted in this case except a spray of orthoform to relieve the irritation.

Lingua nigra, or black tongue, brown tongue, as it is sometimes called, is hyperplasia of the epithelium of the papillae filiformes, which grow to such an extent as to be able to manipulate them, resembling wet hairs. This condition may at times be white instead of brown or black. The pathological change is a hornification of the epithelium. At one time it was thought it was a mycotic disease due to a glosified, which Dessois¹ and Sell² have demonstrated in between these hairs. Brosin³ and Roth⁴ claim its cause to be a microorganism which is so constantly situated in the oral cavity, but Schech⁵ has found that very few microorganisms are situated in between these hairs. The color of these hairs is said to be due to the aged condition of the epithelium. The hornification, a constant increase in the present pigment. It is accepted as a combination of hyperkeratosis and melanotic growths.

The symptoms: There is a constant sensation about the tongue.

and bad breath. The sensation of a foreign body in the mouth. Objectively, one sees these hairs start from the region of the circumvallate papilla, broad and gradually tapering toward the tip of the tongue. You can raise these hairs upwards, and they remain in this position until brushed down by the roof of the mouth or otherwise.

The etiology: It is said, that chewing, smoking and other irritants of the mouth are the cause of this growth, but they have been found in women and children, who are not addicted to such habits. Gastro-intestinal disturbances have been blamed for this affection, and I wish to state that this patient while given cascara sagrada claims that following its administration and action the mass entirely disappeared, only to return within three weeks. Acid reaction of the saliva is another cause. Diabetes, cancer, and trophoneurotic changes are other etiological factors given.

The diagnosis is not difficult, and must be made from other discolorations, as, first, colored foods and remedial agents; second, pigmentation, as in morbus Addisoni, xanthelesma and argyrosis.

The treatment: The local application of a ten per cent alcoholic solution of salicylic acid, or ten per cent bichloride of mercury solution. Schech cures these masses off. Brosin cures and applies strong astringents. Unna⁶ applies a layer of cotton saturated with peroxide of hydrogen over this mass, and allows the tongue to be pressed gently against the hard palate for a half an hour. In this way he gets rid of the pigment, and softens the masses down so that they do not irritate. He also recommends the frequent application of a ten per cent resorcin ether with five per cent collodion. He also recommends the use of a weak salve of salicylic acid, the masses having previously been soaked for a half an hour in the soap spirits of Hebra.

Discussion.

David Lieberthal: I wish to thank Dr. Beck for the opportunity of seeing this case, and also the Society for permitting me to discuss it.

Affections of the tongue are equally interesting for us dermatologists as to you, gentlemen. We have frequent opportunity to observe such cases, considering that some affections of the skin are complicated by lesions of the mouth.

I would like to call attention to the fact that filamentous projections which are well pronounced in this are absent in some cases, especially in those of children. The affection then presents an uneven, slightly elevated, pigmented area. This is an important point I wish to add to the differential diagnosis outlined by Dr. Beck. As long as the filaments are present the diagnosis naturally offers no great difficulty. If they are absent, the diagnosis is more difficult. We have to consider the lesions of lichen planus, and a certain form of leukoplakia of the tongue. Lichen eruptions of the tongue are white or slate-colored, round, and are mostly with a smooth surface. In leukoplakia will be found lesions of the tongue. Mycosis limited to the

tongue seems to be quite rare. A case which I observed presented semilunar plaques of grayish yellow color, not raised. These were located anteriorly to the circumvallate papillae and extended in streaks anteriorly and laterally in fissures of the tongue. Scrapings from these areas revealed the presence of a leptothrix.

With reference to the treatment of lingua nigra, I do not think that permanent cure was derived in any case from medical or surgical treatment. In as much as cutaneous hyperkeratotic lesions yield to the X-Ray, I should suggest to Dr. Beck to employ the X-Ray in his case.

Dr. Beck (closing the discussion): This case practically has had no treatment. I am going to treat these lesions with the cautery, and if that fails I may use the X-Ray.

Perforation of the Drum-head by Tampons.

J. Holinger: The patient whom I show you is 30 years of age. For about eleven weeks past, he has been suffering with inflammation of both middle ears which was treated by his family physician by means of tampons. When he came to my office, both were stopped with cotton, a piece of which had been pushed entirely through one drum into the middle ear.

Note particularly the left ear, in which the drum-head shows the consequence of this treatment. There is an oval perforation; the mallet is directed inwards; and this upper part of the drum-head (illustrating) was forced inward. On the lower margin, absolutely nothing of the membrane remained but now it begins to form nicely for you can see it presenting a red granulating edge. Still, the upper part is adherent to the promontory and I do not believe that it will be possible to put it back again. The handle of the mallet is entirely luxated inwards. The whole condition is simply the result of stuffing the ears.

The disagreeable feature in this case is that the hearing for whisper is only 20 centimeters in one ear and 40 in the other. It is wholly impossible for the patient to follow any conversation.

That these consequences are due not to the inflammation above but to the treatment is in my judgment clear for the following reason:

If the position of the mallet were the result of traction by the *tensor tympani* muscle alone, there would be a protecting fold of the membrane from the short process backward and forward. This fold is absent and the membrane forms two dome-like cupolas in front and back of the handle of the mallet. And also the fact that a pledget of cotton had to be removed with considerable force from within the middle ear, and I do not see how to escape the conclusion that the pathologic condition as well as the diminished hearing is due to the packing of the ear.

This treatment is widely accepted and taught in the colleges, but this case shows how it is sometimes carried out in practice. Would it not be much wiser to use the safe, and simple treatment of Betzold, viz.: syringing with warm boric-acid solution. This will give quicker and better results.

Norval H. Pierce presented a case of **Exotic Sound in Both Ears**, which could be heard through the otoscopic tube, and could be auscultated over the cranium, the mastoid, or occiput.

John A. Robison read a paper entitled **Skiagraphic Diagnostic Fallacies**, illustrated by a case.

Several months ago I purchased an X-Ray outfit for diagnostic and therapeutic purposes. Having been an amateur photographer for some years I thought I could make satisfactory skiagraphs after some experience. My aim was to see to what extent skiagraphy would be valuable as a means of corroboratory diagnosis in internal medicine. And I thought it might provoke some expression from the members of this Society if I would relate some of the errors I encountered.

First. The development of skiagraphic plates is more difficult than the development of the ordinary plates. You must eliminate all sources of error intrinsic in the plate, the developing fluid, and the manipulation of the X-Ray apparatus. I found quite a number of the plates would develop more rapidly in certain spots than others. In one instance I was shown a plate where a dark spot over the region of the left kidney had been pronounced to be a renal calculus. I took two skiagraphs of this patient, and was unable to find the shadow. I persuaded the patient to secure another skiagraph from the first operator, who subsequently acknowledged he did not obtain the same result in his second plate. I have seen skiagraphs of lungs where the light areas did not exist in subsequent plates.

In the development of skiagraphs we have not the contrast of light and shadow as in ordinary photography. The entire plate in the developing fluid speedily becomes dark, and it is easy to overdevelop the plate, and obliterate the contrast between the lights and shadows. And it is to secure the proper contrasts that experience in the exposure of the patient to the X-Ray becomes necessary. And it is only possible to secure good results by experience, and in medical skiagraphy the interpretation of the results can only be truthfully made by a physician, no layman having the necessary pathological knowledge to enable him to interpose the shadows cast by various pathological conditions.

But granted that the technique has been perfect, can errors ensue from the wrong interpretation of the skiagraph. Such was my experience in two cases.

Case 1. Mrs. S., aged 66, was first examined by me July 14, 1902, and I diagnosed a stricture of the oesophagus probably cancerous. The cervical glands, especially the left, were enlarged and painful.

The patient complained of dyspnoea on exercise, a rapid pulse, palpitation of the heart, and occasional haemoptysis.

There was a systolic murmur at the base of the heart, and the left radial pulse was less in volume than the right. The sphygmographic tracing shows the impulse of the heart is weakened, and the arterial recoil is deficient also, that the heart intermits.

Antemortem I believed from the symptoms, and physical signs, that an aneurism of the aorta might exist with the cancer of the oesophagus. Consequently I made a skiagraph which apparently shows quite a large shadow commencing about the right third rib curving to the right and upwards as high as the sternal articulation of the clavicle to the left and downwards to the lower border of the first rib, simulating the shadow cast by an aneurismal tumor, but lacking when viewed by the fluoroscope expansile movement.

December 12, 1902, the autopsy revealed carcinoma of the oesophagus extending from the level of the superior opening of the larynx to the lower level of the thyroid gland. The thyroid gland was considerably enlarged, the right lobe being 5x3 c.m., the left 6x4 c.m., and cartilaginous in structure. The posterior part was invaded by tumor tissue, the tumor extending from the posterior part of the right lobe of the thyroid to the oesophagus which it encircles.

Evidently the skiagraphic shadow was caused by the tumor tissue of the thyroid gland.

Case II. Was a case referred to me for a skiagraph by his brother, a physician.

The patient was a robust man aged about 35, who sustained an injury to his right knee by a fall. Shortly after the injury the knee became swollen, painful and somewhat reddened. It was immobilized in a plaster of paris splint, and the pain was relieved, but when the splint was removed the physician was surprised to see that the swelling had increased, and the patient was unable to use the knee.

This skiagraph was taken, and it seemed to us that there must have been an inter-articular haemorrhage. The knee joint was aspirated and grumous blood obtained—Iodoform—subsequent operation: **Sarcoma**.

Discussion.

E. Fletcher Ingals: I have not taken skiagraphs, but I have been using the fluoroscope for some time. I have noticed in two cases very deceptive shadows. Posteriorly, at the left of the third dorsal vertebra or thereabouts, in the first case I saw a rounded projection apparently from the aorta projecting about three-quarters of an inch to the left and extending about 1¼ to 1½ inches up and down. I supposed this was an aneurysm. The man was sixty-odd years of age and presented many of the symptoms of atheroma of the aorta. When I saw this shadow I felt confident that he had beginning aneurysm, and I so told the physician who was with him. He died shortly thereafter, and post-mortem examination did not reveal any aneurysm, although the atheroma was marked.

In another case I observed a similar shadow, but I recollecting the case just referred to did not make the same diagnosis. I do not know what has become of that case, as I have not seen him since. Such a shadow is likely to lead one into error, and I have not been able to satisfy myself what causes it.

Wm. L. Ballenger: Having had some experience in photography, I can fully appreciate the difficulties of developing plates from the X-Ray machine. In taking a picture of a land-

scape, where you wish to show a cloud effect, if the development of the plate is carried beyond what it should be, the clouds will disappear, leaving simply a blank white space for the sky. The same thing occurs if the exposure of the plate is too long. If, in taking a photograph, it is exposed longer than it should be, there will be a white sky instead of a clouded sky. This same principle can be applied to the antrum of Highmore. If there is a light shadow from the diseased condition present, and the light put into the mouth is too strong, it will dissipate the shadow and make this case appear normal, whereas the proper illumination would show the shadow.

This paper is an interesting one, and is of great technical value in this sort of work.

Three things are essential, namely:

- a. Normal exposure of the plate.
- b. Normal development of the plate.
- c. Normal printing and toning.

Joseph C. Beck: In connection with the cases mentioned by Dr. Ingals, I would like to relate the case of a man who came to me with a constant irritation of the throat, associated with coughing after eating. He would cough until, he said, most of his food would come up. I examined him carefully and could not find anything about his throat or in his esophagus. I witnessed this symptom, after a meal that shortly after he ate he would cough until particles of food which he had eaten came up. Further examination disclosed the presence of Meckel's diverticulum. X-Ray pictures were taken, which showed a dark area in the region of the pharynx at the junction with the esophagus, when the diverticle was filled with food and clear when he had coughed it out.

Dr. Joseph C. Beck reported a case of **Marked Hypertrophy of the Inferior Turbinated Body.**

This specimen is a true hypertrophy of the lower turbinated body from a patient suffering with chronic sinusitis on both sides, with marked polypoid degenerated conditions in the upper part of the nose. Polyps were frequently removed and the anterior end of the middle turbinated body. Curettage repeated. The patient was not able to breathe through the nose after all these repeated operations. Post-nasally, one could see the posterior nares completely filled out by two large pinkish masses which I made out to be the posterior ends of the inferior turbinated bodies. I concluded to remove the same, and put a hot snare (Gradle's) over the posterior end on the left side, and drew down on the mass tightly, turned on the current, but, perhaps fortunately, as the specimen shows, as the entire turbinated body is so markedly changed, the wire did not get hot nor would it cut the mass by the cold method. I could not disengage the snare very easily, and there came to my mind how Mueller, of Vienna, used to remove these masses, and so I attempted to do the same. I pulled forward with considerable force, and out came what you see. I expected some bleeding, but found this to be very little in amount. The wounded surface healed nicely; the bone was not exposed except at the lower end, and that, as said above, healed by granulations. The patient told

me the following week that he, for the first time in six years, breathed through his nose and could keep his mouth closed. The other side was in the same condition, and I proposed to do the same operation. This time I prepared Krause's snare, but on pulling the mass forward it broke, and I succeeded in removing it in several pieces. One of these (the posterior end) I examined microscopically, and found it to consist of true hypertrophic tissue, abundant of connective tissue. The bleeding was more on this side, and the healing slower, but a fairly good result was obtained also.

An interesting point in this case was the double-sided true hypertrophy of the anterior part of the septum, which, when you looked into the nose, looked like two marked exostoses, which could easily be pressed in with the probe. I shaved them off flush with the septum.

I have another case under my observation of double-sided sinusitis with this same enlargement of the inferior turbinated bodies, and I believe there is a connection between the sinusitis with polypoid degeneration and these extremely large hypertrophic turbinated bodies. In this latter case I have repeatedly tried the use of the cautery, with negative results.

Dr. John Edwin Rhodes exhibited a **Tonsil Punch Forceps.**

John Edwin Rhodes: It is occasionally impossible to thoroughly remove a tonsil with the snare or the guillotine. Especially is this true with regard to those that have a broad base, do not project well beyond the pillars of the fauces, or are very irregular extending high up in the angle between the pillars or low down in the lateral wall. It is sometimes found that the operation has not removed the tonsil completely and that masses which have not been engaged in the loop of the snare, or the fenestrum of the guillotine still remain. In other cases, where excision seems desirable, neither of these instruments will do the work satisfactorily, from the impossibility of getting hold of the tonsil, and we wish a method of removal that is available either under a general or local anaesthetic or even without anaesthesia, in some cases. Without criticising the use of scissors of various forms, or the dissection with a cautery knife, I prefer, in many cases, for these conditions, a punch I have devised for the purpose, and which I have used a good many times since, with the greatest satisfaction.

This punch forcep is a modification of one shown me by Dr. Bouffleur which he designed for operation on the prostate. The curves of the handles and jaws are somewhat similar to the Loewenberg forcep, for operation on adenoids. The cutting edges of the forcep are so curved that it would be difficult to get the pillars of the fauces within its grasp, or to dissect deeply, beyond the floor of the tonsil. Only those tissues seized within the jaws of the forcep are removed. The handles are six and one half inches long from the screw lock, and curved outward from the shanks of the cutting jaws. The shanks of the jaws stand at an angle of fifty-two degrees outward from the handle shanks and are curved to an arc included within eighty-four degrees of a circle of one inch radius. The

cutting edges extend three-fourths of the length of the perimeter of an ellipse, the major axis of which is 59-128 inches and whose minor axis is 43-128 inches. They approach each other at a slight angle, first touching at the distant end of the conjugate diameter as a center and then gradually closing both edges, which action produces a perfect shearing cut. They were made for me by Sharp & Smith, of this city.

Dr. Joseph C. Beck read a paper on **Salpingoscopy**.

Salpingoscopy is a term given by Valentine to the method of examination of the ostium of the Eustachian tube and the naso-pharynx, by means of his salpingoscope, which is nothing more or less than a small cystoscope. Hirschmann claims the priority of this instrument, and calls it the endoscope, for the purpose of examination of the nose, especially the ostia of the accessory sinuses. Reichert examines the antrum by a similar instrument, and calls it the antroscope. The salpingoscope, as you see it, without going into further detail or description, consists of a tube with an ocular piece at the proximal end and a prism mounted by a light with a small curve on the distal end. The introduction of the instrument is the same as the Eustachian catheter, being thoroughly cleansed and the prism covered with lysol or soap, so as to prevent steam from covering it like a laryngeal mirror. The distal end is now situated in the naso-pharynx, and the curve or the position of the prism is indicated by the little white button on the proximal end. The current is turned on or off by the little switch on the handle of this instrument.

The technique of examination is as follows: Place your eye to the eye-piece and make contact by turning on the switch, and you will find if the button (white) is situated towards the lateral side you will see the vicinity of the tube illuminated, and by moving the instrument gently forward and back, you get the outline of the ostium tubis with its anterior and posterior lips, and the dark shadow of the opening. It must not be forgotten that we are looking through a prism, and therefore the object is inverted, or, rather, an inverted image. Also, that parts situated close to the prism appear very large, while those away extremely small, as Valentine shows in his picture, that is, the velum of the palate very large and the larynx miniature-small. However, the lateral wall of the post-nasal space which we are now examining is not markedly changed in size, because its distance is about medium from the prism. One may examine both openings of the tubes through one nostril; however, as said above, one will look very much smaller than the other. Cocaine is not necessary any more than by passing a catheter, that is, in extremely irritable, hypersensitive subjects.

When I first saw the article of Valentine, published in the Archives of Laryngology, I was fascinated by his writing, for he was so positive in his statements, and lucid in his description, and consequently I lost no time in obtaining the instrument, and used it for a short time, about two weeks. I came to the conclusion that it was over-rated, or perhaps I did not know the proper technique, or what I

should be able to see. I therefore offered the instrument to Dr. Gradle, to use it in his office for a period of a week, and give me his opinion, perhaps instructions. I hope he will tell us about it tonight. At that time he would not express himself. I started anew to use it, and now for the past six months have examined in all a hundred and twelve cases of different pathological conditions, as well as normal, and have come to some fair conclusions. The various conditions I used this instrument for examining were as follows:

1. Acute salpingitis, that is, particularly following and associated with an acute rhinitis, where the patient complained of a fullness in his ear.
2. Acute rhinitis without the symptom of fullness in the ears, including hay fever.
3. Acute otitis media, non-suppurative.
4. Acute otitis media suppurative.
5. Chronic otitis media non-suppurative.
6. Chronic otitis media suppurative.
7. In cases where I could not place properly the Eustachian catheter, or inflate with satisfaction.
8. In the use of a bougie.
9. Adenoids.
10. Chronic post-nasal catarrh.
11. Marked hypertrophies of the posterior ends of the inferior and middle turbinated bodies.
12. Atrophic rhinitis.
13. Examination of the ostium maxillaris in sinus disease, where the anterior half of the middle turbinated body had previously been removed.
14. The roof of the nose, in the same conditions.
15. Antrum of Highmore through the opening of the jaw.
16. The act of swallowing and speaking in the healthy subject and in one with paralysis of the soft palate.
17. Tubercular and syphilitic laryngitis. Also normal larynx.

I wish to say here that the larynx may be examined by means of this instrument, being situated in the nose, the prism turned downward, and while the patient is instructed to breathe freely through the nose, one can see the chink and sometimes the vocal cords. Again it may be used in the mouth, as Valentine and others have used it, particularly in young individuals, and get a much larger and clearer image of the larynx.

To report each individual case of these above named conditions would be very interesting, but altogether too lengthy, and I will therefore report briefly and say one can learn a great deal by the aid of this instrument after he has used it a while, having accustomed himself to the method of examination, and the conditions he is examining. In the first place, I found in acute salpingitis marked swelling of the mucous membrane of the ostia. Thick mucus in the openings of the tubes, which I could see dislodged by the act of swallowing. I have seen pus coming down from the tubes in a case of chronic suppurative ear, where I had done a previous ossiculectomy. Adenoids, as Valentine

calls attention to, look small, but you can see their divisions very clearly, and thick secretion on and in between their spaces. I have not found one case of adenoid tissue in the opening of the tube, but two cases in which the masses were pressing on the posterior lip of the opening of the Eustachian tube.

In cases of chronic catarrhal otitis media I could find nothing of great difference from an ordinary chronic post-nasal catarrh; where the patient complained of a cracking sensation in swallowing, I imagined I found some mucus in the openings of the tube. In one case I saw a large blood vessel on the posterior lip of the ostium tuba. The catheter as well as the bougie can easily be seen in position, the latter while situated in the tube, removing the metal catheter, and in that way exposing its situation in the Eustachian tube to the salpingoscope. The mulberry appearance of the posterior ends of hypertrophies of the turbinated bodies; in fact, any part of the nasal cavity, are very difficult to make out, and I believe this is due to the already stated fact that the prism is so closely situated to the structures that they look so large as to impossibly interpret them as what they are. The examination of the ostium maxillaris after the middle turbinated body has been removed is also of very little value for the same reason given above. However, the examination of the ostium through an opening in the upper jaw is very easily made out. I could see pus and polypoid masses in the antrum.

My conclusions are the following:

1. That it is an aid in diagnosis worth while applying.
2. It is absolutely necessary to familiarize yourself with the technique for a longer time, and learn the comparative sizes of the structures.
3. That its use is principally of value in the naso-pharynx in examination of the ostium tuba.

References.

1. Valentine: Die Cystoscopische untersuchung des Nasenrachens oder Salpingoscopie. Arch. f. Laryn., 1903, Bd. XIII, Heft. 3.
2. Hirschmann: Endoscopie der Nase und deren Nebenhohlen. Arch. f. Laryn., Bd. XIV, Heft. 2. 1903.
3. Reichert: Ueber eine Neue Untersuchung der Oberkieferhohle mittels des Antroscopes. Berlin. Klin. Woch., No. 18, 1902.

Dr. George E. Shambaugh gave a lantern slide demonstration of the blood vessels of the labyrinth of the ear. He also exhibited microscopic preparations.

Dr. F. Gurney Stubbs read a paper entitled *A Modification of the Krieg Operation for Deviated Septum.*

The indication for operative interference of the septum narium in most cases is a lack of sufficient patulency of the nasal passages.

Posteriorly: Where there is more room laterally, even a considerable deviation or spur will cause no marked obstruction, for not only on account of the increased room, we also find there is a tendency for the turbinate to recede in a compensatory manner.

Anteriorly: The same degree of deviation or presence of a spur becomes of marked importance the nearer it lies to the anterior meatus. Here the nasal process of the superior maxilla presents an unyielding resistance to any compensatory shrinking, and consequently all manifestations of obstruction become accentuated.

Hence it is that most operations on the septum have to deal with the triangular cartilage, and if there the major proportion are confined to the cartilage itself.

Consequently, it is always worth considering any procedure involving the operation of these parts, which is calculated to facilitate the ease of operation, hasten the period of repair, and leave less sequelae.

Perhaps the simplest method proposed is to make a permanent perforation, removing in part, or in its entirety, the deviation by either a scalpel or so-called "punch" forceps (1); Next comes the method of incising the septum in one or several directions and with force attempting to bend the offending part toward the wider naris and hold it there till healing takes place; for example, the Asch (2), Rethe (3), and Gleason (4), operations.

A more elaborate method includes those operations which propose to remove part or all of the cartilage and bone involved without incising both mucous walls of the septum. To this method belong the procedures of Ingals (5), Petersen-Hartmann (6), and Krieg-Boenninghaus (7).

In the Ingals operation only a triangular section of the deviated cartilage is removed, thus making merely a small channel of permeability for the obstructed naris.

The Krieg-Boenninghaus operation removes not only all the cartilaginous, but also all bony parts entering into the deviation. An incision of the muco-perichondrium is made perpendicularly and horizontally on anterior and superior lines of deviation, the same is now separated on both sides by means of an elevator and removed by scissors and forceps, with no attempt made to save the muco perichondrium on side of convexity.

The Peterson-Hartman operation attempts to prevent this sacrifice of the muco-perichondrium of the one side, which leaves a large surface bare of normal mucous membrane, to be healed over with changed epithelium. A flap of muco-perichondrium is made, dependent from above and corresponding to the size of cartilage to be removed. This is allowed to fall into place after operation, and does in a measure reduce the area of denuded surface, but on account of the difficulty in making the incisions and the large area exposed by shrinkage of the flap, it is not in much favor.

Freer (8) has suggested some modifications in the manner, of saving the muco-perichondrium and has devised a number of special instruments to assist in carrying this out. A triangular flap is made, the perpendicular incision being on crest of deviation, the horizontal joining this anteriorly on its lower end, and drawn forwards on its line of hypotheneuse—then with special knives a triangular area of

cartilage is removed, and through this window the remaining cartilage. Instead of removing what bony parts enter into deviation as in the Krieg-Boenninghaus operation, fractures by means of a chisel are made and these parts brought into alinement with Roe's forceps.

While I do not offer a new operation, I propose a different point of incision for the operation, and attempt to save all of the muco-perichondrium, removing cartilage and bone by the Krieg-Boenninghaus method.

After the usual preparation of field of operation, cocaineize the mucous surface with either a 10 per cent or 20 per cent solution, injecting either a 5 per cent solution or a Schleich solution into muco-cutaneous junction of septum. With an ordinary scalpel an incision is now made perpendicularly along the entire anterior edge of the triangular cartilage on side of convexity, this being facilitated by drawing the fleshy part of septum sharply to opposite side. With a small flat, somewhat curved on the flat, perichondritome or elevator separate the muco-perichondrium over the cavity. Then, beginning at anterior edge of cartilage, do the same on side of concavity. The field of vision is improved by having the assistant, who stands behind patient to steady head, use one or two blunt hooks or retractors to open naris in place of a nose speculum. If desired, a stitch can be taken in fleshy portion of septum, which will include a strip of gauze. This will help to retract anterior edge of septum to opposite side. When both sides of cartilage are stripped, the mucous membrane generally balloons to opposite sides and exposes the cartilage in its entirety.

The cartilage is now cut out, preferably with a pair of Grunwald's alligator scissors. If more is desired to be removed, superiorly or inferiorly, it can be trimmed down with a pair of Krause's fenestrated cutting forceps.

Should there be a bony involvement in the deviation, continue the separation backward of the periosteum and remove the bone with a fenestrated cutting forceps, preferably those of Laurent.

If deviation involves only posterior half of cartilage, the incision in same can easily be made in front of convexity and muco-perichondrium separated only over concavity of deviation.

With all deviation removed, the linear incision can be stitched or not, as suits the operator, while moderately snug packing on both sides bring the muco-perichondrial walls firmly together and prevent an accumulation of blood between them.

In order to utilize this incision so far forward for those deviations situated farther back on septum, it is necessary to strip a part of cartilage which is not removed. But there is no danger in this, as it immediately adheres to mucous membrane on being again coapted. Thus the incision is maintained well forward, where it can be preserved from injury during operation and completely united afterwards. It is in a position, through which it is easier to work and allows of better control of instruments when working far posteriorly and a good view of field of operation.

Nor is its utility limited to deviations. All spurs on cartilage or on cartilage and bone can be removed without interfering with the intactness of the mucous membrane. Through this incision first separate the muco-perichondrium and then by means of a chisel, preferably a Hajek spur chisel, the spur can be cut off and removed through the incision by forceps; the mucous membrane is then coapted to the straight and smooth septum by packing the naris involved. Thus no subsequent crusting and granulation tissue has to be dealt with; for the nearer the anterior meatus the more frequently this unpleasant sequela accompanies loss of mucous membrane.

It is no longer necessary to defend the procedure of removing cartilage and bone of the septum. This has been done so well in the papers of the authors of the various operations and experience has proven the theory. I would say, though, that it is scarcely ever necessary to remove a strip of cartilage lying in apposition with the external bones and cartilages of the nose. And farther in the greater proportion of cases there is reformation from the perichondrium.

The following cases are illustrative:

Case I. Frank W., aged 33. Large hemispherical deviation of septum towards right side, involving most of triangular cartilage and with one off-shoot, running onto vomer. Incision at anterior edge of cartilage and removal of deviation. Two stitches taken. Time of operation, including preparation and cocaineization, fifty-five minutes. Packing removed on 3d day, none being replaced. Stitches removed on 5th day, when septum was perpendicularly straight in median line and with healthy normal mucous membrane on both sides.

Case II. Charles S., aged 12. Left nostril completely occluded by a cartilaginous deviation, while the anterior edge of cartilage projected one-third of an inch beyond the median line to right, drawing extreme tip of nose with it. Under cocaine anaesthesia, anterior half of triangular cartilage was removed, including upper anterior angle, both straightening the tip of nose and removing deviation. Time required, forty-five minutes. In spite of the patient's youth, he stood the operation with scarcely a complaint till almost through, when reapplication of cocaine allowed completion.

Case III. Henry E., aged 35. Large horizontal spur or echondrosis of left side of cartilaginous septum, appearing in external meatus and extending backward over one inch, projecting outward across naris. Usual incision and separation of muco-perichondrium, and then, with a Hajek spur chisel, spur was cut flush with balance of septum and removed with rat-toothed forceps. One stitch was taken in incision and small gauze packing inserted to hold muco-perichondrium in apposition with cartilage. Gauze removed on third day, stitch on fifth day, with a perfectly normal, unbroken mucous membrane to be seen on a straight septal wall.

Case IV. Peter J., aged 29. Unreduced fracture of nasal bones from injury when child, with resulting "saddleback" nose. Deviation of cartilaginous septum completely blocking left

naris. On right side of septum a large horizontal spur involving cartilage and bone, beginning anteriorly where deviation originates and so large as to half close right naris.

Through the usual incision cartilage removed so as to entirely and thoroughly restore left naris. Then through same incision the perichondrium and periosteum over spur on opposite side was elevated and spur cut off with chisel and removed with forceps. Both sides packed with gauze and no stitches taken. Time of operation, 50 minutes. Packing removed on third day and replaced by fresh, which remained two days longer. On tenth day corrected "saddleback" depression with paraffin injection, when the septum was shown with intact normal mucous membrane and all nasal obstruction completely removed.

I think these cases are sufficiently demonstrative of the utility of this line of procedure in such septal operations to claim for it:

- 1st. Shortening of time of operation.
- 2d. Better command of field of operation.
- 3d. Less hemorrhage, both at time of operation and secondary.
- 4th. No flap that can be injured during operation.
- 5th. Preservation of entire intact mucous membrane.
- 6th. A resulting straight and even septum.
- 7th. Need of but few instruments, and these not necessarily specially constructed for this operation.
- 8th. Should mucous membrane be punctured on side of concavity a perforation does not follow.
- 9th. Shortening of time of repair.
- 10th. Obstruction of naris satisfactorily removed.

(1) V. Bergmann: Verletzungen, Fracturen, Dislocationen der Nase, Handb. d. Lar. u. Rhin. iii.

(2) M. J. Asch: Trans of 12th Annual Meeting of the Am. Laryngol. Assn., 1890.

Emil Meyer: "Deviation of the Cartilaginous Septum, Its Cure." N. Y. Med. Jour., Dec., 1895.

Emil Mayer: "Asch Operation for Deviation of the Cartilaginous Nasal Septum." Med. Record, Feb., 1898.

M. J. Asch: Laryngoscope, Vol. VI., 1899.

(3) Rethi: "Die Verbiegungen der Nasen-Scheidewand." Wiener Woch., 1890.

(4) E. B. Gleason: "Treatment of Deflection of the Nasal Septum." Jour. A. M. A., Vol. XXXVI, March, 1901.

(5) F. Ingals: "Deflection of the Septum Narium." Arch. of Laryngol, No. 4, 1882.

(6) Hartmann: "Partielle Resection der Nasen-Scheidewand bei Hochgradiger Verkrümmung." D. Med. Woch. No. 51, 1882.

Petersen: Ueber Subperichondriale Resection der Knorpeligen Nasescheidewand." No. 22, 1883.

(7) Krieg: Beiträge zur Resection der Cartil. Triang. Sept. Nar. zur Heilung der Scoliosis." Berl. Klin. Woch., No. 31, 1889.

(8) Weer: "The Correction of the Nasal Septum with a Minimum of Traumatism." The Jour. A. M. A., Vol. XXXVIII, Mar., '02.

Chicago Surgical Society.

Regular meetings held in Schiller Hall, the first Monday of each month from October to June at 8 p. m. Membership —

Officers.

President E. Wyllys Andrews, 100 State st
Vice President M. L. Harris, 100 State st
Secretary A. E. Halstead, 2937 Indiana ave
Treasurer D. N. Eisendrath, 3125 Michigan ave

A regular meeting was held December 7, 1903, with the president, Dr. E. Wyllys Andrews, in the chair.

Dr. Wm. M. Harsha reported three cases.

1. **Keloid Treated by X-Rays.** The patient was a young man, 18 years of age, with a small growth behind the right ear, which had existed for ten years. Five years ago it grew to the size of an ordinary marble. It was excised. In three or four months the tumor was as large as ever, and finally grew to be twice the size it was formerly. Histological examination showed the characteristic formation of keloid. The growth was gradually becoming smaller and smaller under X-Ray treatment, so that at present it was only one-sixth of the size it was when treatment was begun.

2. **Pancreatic Cyst.** The second case was one of pancreatic cyst in a man aged 29. The cyst had attained the size of a large coconut, filling the half of the left side of the abdomen. Fluctuation was distinct; there was no temperature, loss of weight or other disturbance. Resonance could be made out above and to the left side of the tumor. An incision was made at the site of the scar from a former operation; the cyst wall presented, and was followed upward to find the colon above and over the front of it, extending to the pancreas. One-half gallon of fluid was evacuated. The specimen was a thick, turbid fluid of a reddish-brown color, containing thicker grayish-brown mucoid masses. On standing it deposited a grayish-brown sediment in abundance. The cyst was drawn up into the opening in the abdomen and incised. The cyst wall was one-eighth of an inch thick. An effort was made to detach the cyst wall proper from the peritoneum, but this was so formidable that the operator was content to stitch the edge of the opening to the parietal peritoneum. A large tube was inserted. This kind of drainage has since been continued. The large cavity of the cyst has gradually diminished in size until the present time. Patient made an uninterrupted recovery. A resume of the literature of cysts of the pancreas was given.

3. **Actinomycosis of Jaw.** This patient, a man, 50 years of age was referred to him with a probable diagnosis of sarcoma of the jaw. The patient had a swelling of the size of a hen's egg at the angle of the jaw on the right side. Actinomycosis was suspected, operation advised, and performed. Microscopic slides showed the characteristic ray fungus in the pus, but not in the tissue. The patient was entirely well.

L. L. McArthur narrated a case of pancreatic cyst, and said the treatment which had given

the best results, though not the lowest mortality, had been total ablation of the sac.

A. E. Halstead inquired why the cyst was not enucleated in Dr. Harsha's case?

Dr. Harsha replied that the cyst at the first operation contained two and a half gallons of fluid, and was so widely adherent that it seemed almost impossible to enucleate it.

Dr. Halstead mentioned two cases of pancreatic cyst that had come under his observation. In one case the wall was extremely thin. The cyst was opened and drained. In the other the cyst wall was thick, and the cyst contained possibly two quarts of fluid. It apparently grew from the tail of the pancreas, because when he removed the cyst a piece of the pancreas came with it. He thought in the majority of cases these cysts could be enucleated, and if care was taken in separating the cyst wall from the retroperitoneal tissues, particularly from the large vessels, like the aorta, there was very little trouble. Both patients made good recoveries.

Dr. Bevan asked whether Dr. Harsha had used iodide of potash in his case of actinomycosis.

Dr. Harsha replied that he had given thirty or forty grains, three times a day, and the patient took it for six weeks.

J. A. Ochsner stated that in several cases in which keloids had been excised and the condition had gotten worse after excision, the improvement was very marked following the X-Ray treatment. In one case the keloid diminished to a very slight thickening. He urged that before removing any keloid now one should treat it thoroughly with the X-Ray.

Xanthoma Infantum.

Louis A. Greensfelder reported a case of xanthoma infantum in a boy, aged 10. The affection dated back as far as the patient could remember. The only manifestations of the disease were found on the cutaneous surface and the tendons, chiefly the extensor digitorum communis, extensor hallucis longus, and tendo-Achilles. On the anterior aspect of the chest was a small pedunculated growth, slightly umbilicated, which is sometimes confused with beginning xanthoma, but this was molluscum contagiosum. The symmetry of the lesions was quite striking. A tumor on the right arm had been removed; a tumor involving the right buttocks was characteristic of xanthoma. There was a tumor of the tendo-Achilles on both sides.

Carl Beck mentioned a case of xanthoma in which he had used electrolysis with satisfactory results.

Conservative Surgery in Crushing Injuries of the Arm.

Daniel N. Eisendrath reported this case as an example of how one could save a member with perfect primary asepsis and the use of conservative methods.

He also reported a case of ulcer of the leg following traumatic thrombo-phlebitis of the lower extremity.

Penetrating Wounds of the Abdomen.

M. L. Harris read a paper on this subject, in which he reported 16 cases, with 3 deaths. Case 1 died quickly from rapid profuse inter-

nal hemorrhage before the source of the hemorrhage could be discovered and controlled. It might, therefore, be excluded. Case 5 might also be excluded, he said, as death was due to shock from injury to both lungs and pleurae and to the spinal cord. Excluding these two cases, there were 14 remaining, with but one death, with eight perforations involving the sigmoid, small intestine and transverse colon, with death on the third day from peritonitis. While in Case 2 no injury to any of the viscera was found, still operation was imperative on account of hemorrhage. In Cases 9 and 10 neither injury to the viscera nor excessive hemorrhage was found.

It may be claimed that these cases would have recovered without operation, and this is undoubtedly true, but who could have foretold before the abdomen was opened?

The operation not only did no harm, but was productive of good, as the bullet which might have given rise to subsequent trouble was removed in each case. But excluding these cases, there were still 11 cases with perforations and hemorrhage in which operation was absolutely indicated, with but one death. Instead of the usual mortality rate of 60 to 70 per cent following operation, there were over 90 per cent recoveries. The reasons for this, according to the author's opinion, are chiefly two: First, immediate operation. All cases but one were operated on within three hours or less of the time of the accident. Second, drainage when the gastro-intestinal tract had been opened.

The question of drainage in this class of cases was thoroughly discussed at the meeting of the American Surgical Association in 1902, and the consensus of opinion was in favor of drainage.

In conclusion the essayist emphasized the following points:

1. In penetrating wounds of the abdomen there are absolutely no known symptoms which indicate injury to any of the viscera, except those noted above in connection with the urinary tract, stomach, and occasionally the lower bowel.

2. Except those relating to general shock, all symptoms following such wounds indicate either internal hemorrhage or peritonitis.

3. To wait for symptoms of perforation of the intestine means to wait until peritonitis has developed; therefore,

4. Every bullet or stab wound which penetrates the abdominal cavity should be operated on at the earliest possible moment, in order to anticipate the advent of peritonitis.

5. No time should be wasted in attempting to demonstrate the presence or absence of intestinal perforation by such means as the rectal insufflation of gases or vapors or the analysis of recollected intraperitoneally injected air or liquids.

6. It is essential to examine systematically the entire gastro-intestinal canal in all cases, regardless of the point of entrance of the wounding body.

7. Whenever the alimentary canal has been perforated, suitable drains should be placed

either through the operative incisions or counter-incisions, as may appear best suited to the individual case.

E. J. Senn reported the case of a woman who fell to the ground, striking on the buttocks. This happened about six o'clock in the evening, after she had partaken of a hearty meal. She retired without any symptoms seemingly. At twelve o'clock that night she was taken with violent pains in the abdomen. He saw the case the following day in consultation. An operation was advised, consented to, and performed. A perforation was found in the lower portion of the jejunum about the size of a small finger-nail. This case showed how there might be a severe injury without immediate symptoms, although he thought the mucous membrane in this case might have protruded in such a way as to have closed off the general peritoneal cavity. He urged early and prompt operation in all cases of perforating wounds of the abdomen.

Arthur Dean Bevan said he was impressed with the reports of the surgeons of the Transvaal war and by the reports of the surgeons during our late war with Spain. He thought these reports could be relied on. In regard to wounds of the stomach, the majority of cases recovered which were not operated upon; a large number of those operated upon died. This statement would not hold good, however, in regard to penetrating wounds of the abdomen in general. There were more recoveries after wounds of the stomach than after intestinal wounds. Where it was possible to do an aseptic operation inside of two or three hours, there could be little doubt that operative treatment should be employed, and he thought the results obtained by Dr. Harris in his cases supported that statement. The conclusions of Dr. Harris, however, should be restricted to civil practice.

L. L. McArthur thought emphasis should be placed upon prompt interference under such ideal conditions as would obtain in hospital practice. In the cases cited by the essayist there was undoubtedly a perfect surgical technique in the way of antisepsis and asepsis, and which was ideally carried out. Dr. Harris had everything at hand and a corps of assistants that rendered it possible for him to invade any part of the abdomen boldly, freely and safely. These conditions, however, did not obtain in many cases.

He was not inclined to believe that every case of perforating wound of the gastro-intestinal tract required drainage, but that the decision should be made upon the conditions found, through the escape of infective material or not, inflammatory reaction in the peritoneum or not. Certainly he thought it should be as safe to close some of these abdomens as to close, for example, the last two perforations he had had, in which the typhoid stools filled the abdomen in each case, and yet washing it out with salt solution and closing the abdomen, both of the patients recovered.

D. W. Graham thought the essayist had been unusually fortunate in getting his cases early and under favorable circumstances. He thought cases had been lost by not draining, and believed many of the good results obtained by the

essayist were due to drainage. Hereafter, in practically all such cases he thought he would drain.

S. C. Plummer narrated a case of stab wound of the abdomen which was inflicted about two inches above and to the right of the umbilicus, with a small portion of the omentum protruding through it. The wound was enlarged and through it an exploration was made, but no injury found to any of the viscera. The exposed portion of omentum was ligated off, and the patient made an uneventful recovery.

He narrated a second case of bullet wound. This patient died from hemorrhage.

John E. Owens said that it was his practice in penetrating wounds of the abdomen to follow the principles laid down by the essayist. The mortality was greatest among those cases in which operations had been delayed. In cases that were operated on early, before the advent of peritonitis, the mortality was very much less.

Dr. Harris, in closing the discussion, said his remarks applied entirely to civil practice. However, he thought the subject of the treatment of wounds in military practice was very much confused. Surgeons knew the great disadvantage under which the military surgeon labored, and the difficulty of getting patients early for operation. The secret of success in these cases was early operation.

James M. Neff exhibited for Dr. John B. Murphy a specimen from a seven months' abdominal gestation, removed thirteen years later.

Polycystic Kidney.

Arthur Dean Bevan showed a large polycystic kidney. In this case the clinical symptoms were those of pain on the right side in the kidney region. The man had considerable hemorrhage and secondary anemia from it. The usual incision was made and the mass exposed and removed. The patient made an uninterrupted recovery, having regained his health, weight and strength.

Hypernephroma.

The second specimen exhibited was removed from a case of hypernephroma. An interesting feature connected with the case was that part of the mass projected into the pelvis like a polypus projects into the vagina, and was responsible for the free hemorrhage which was encountered in the case, with profound secondary anemia.

He had encountered seven or eight cases of hypernephroma, and said that this form of tumor was a common form of malignant tumor of the kidney. Furthermore, the most severe hemorrhages he had ever seen from the kidney had been in cases of hypernephroma.

Hypernephroma.

S. C. Plummer reported the case of a man, 68 years of age, who, fourteen months before operation, had a very profuse hematuria. There were practically no symptoms. Patient discovered the tumor accidentally one morning, and about this time he was beginning to show symptoms of malnutrition and weakness. The tumor was removed and proved to be a hypernephroma. There were several cysts connected with it.

A. E. Halstead, Official Reporter.

Regular meetings are held the first Tuesday of each month at Hipple & Clark's Real Estate office, 907 Wilson ave., at 8 p. m. Membership 40.

President	M. Herzog
Vice President	Dr. Young
Secretary	Geo. E. Baxter

The meeting was unusually well attended and the prospect for the work of this Branch for the winter is very bright.

The banquet committee of last year was re-appointed to make arrangements for the annual banquet to be held some time in December.

C. H. Lovewell read a very practical and interesting paper on **Fractures and Dislocations**.

The committee on banquets reported that arrangements had been completed for holding the annual banquet at the rooms of the Englewood Men's Club, 63d Street and Harvard Avenue, and that tickets for the same are now on sale by the Secretary at \$1.50 each. Reception 6:30 p. m. and banquet at 7:30 p. m., Wednesday, January 6, 1904.

At the meeting of the Council, Dec. 8, 1903, the following were elected to membership in the Society: Drs. Gustav J. Bergener, W. R. Cubbins, Abraham L. Freund, A. Ganzevoort, I. B. Hassin, F. J. Hellebrandt, Elmer L. Kenyon, Paul B. Kionka, Clifford S. Losey, J. W. Mott, Robert Peter, J. C. Pickard, Fred H. Pirnat, Gaetano Ronga, Hugh K. Schussler, W. N. Senn, Alex. C. Soper, Jr., William F. Stokes.

Dr. Wilder read a paper on **Headache; Its Relation to the Eye and Its Significance in General Medicine.**

Medical Examiners' Association.

The regular annual meeting of the Chicago Medical Examiners' Association was held in the hall of the Chicago Medical Society, Schiller Building, on Tuesday evening, Dec. 22, 1903, at 8:15 o'clock.

1. The Pulse as a Guide for the Life Insurance Examiner, Robert H. Babcock.
2. Medical Examination for Life Insurance in Large Cities, L. Brackett Bishop.
3. Tuberculosis and Life Insurance, Thomas Grant Allen.

The December meeting of the Southern District was held at the Vendome Hotel, 62d Street and Monroe Avenue, Thursday evening, December 17, at 9 o'clock.

Program.

1. The Treatment of Compound Fractures, F. A. Besley.
2. Malnutrition in Infants, F. X. Walls.

 *
 * West Side Branch.
 *

The regular meeting of the West Side Branch of the Chicago Medical Society was held in the Cook County Hospital, Thursday evening, Dec. 17, 1903, at 8:30 o'clock.

Program.

1. Cystitis in General Practice, Gustav Kolischer.
2. Some Chicago Orthopedic Geography, F. C. Test.
3. The Mercurial and Iodin Injection Treatment for Syphilis, L. E. Schmidt.
4. Subcutaneous Injuries of Abdomen, W. E. Schroeder.

We have been pleased to see physicians from other districts of the city at our meetings.

 *
 * Northwest Branch.
 *

Regular meetings are held the first Friday of each month at ———. Membership —.

Officers.

President	M. H. Luken
Vice President	Karl F. M. Sandberg
Secretary	Louis J. Pritzker
Treasurer	C. F. Roan
Councillor	E. C. Seufert

The Northwest Branch of the Chicago Medical Society held a regular monthly meeting on Friday, December 4, 1903, at its usual meeting place.

The scientific program of the evening consisted of a paper on **Rheumatism of the Appendix in Childhood**, by Frank X. Walls. The paper was discussed by Drs. Seufert, Berard, Grinker, Pritzker, Fischkin and Walls. On motion, the Society tendered Dr. Walls a vote of thanks for the excellency of his paper.

The following motions were carried:

1. That our annual meetings be held in June.
2. That the annual banquet be held in January.
3. That we retain our present meeting place another year for want of a better location.

Election of officers was next declared in order and, on motion, all the present incumbents were re-elected by unanimous vote of the Society to serve until June, 1904, or until their successors are elected.

The following By-Laws were adopted:

Article I.—Name.

This Society shall be known as **The Northwest Branch of the Chicago Medical Society.**

Article II.—Object.

The purposes of this Society shall be to bring into one organization the physicians practicing in the district bounded on the south by the Northwestern tracks, on the east by the Chicago river, on the north by Graceland avenue, and on

the west by the city limits; so that by frequent meetings and full and frank interchange of views, they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, legislative, public health and material and social affairs; to encourage research, to settle disputes and adjust the ethical relations of its members.

Article III.—Membership.

All the members of the Chicago Medical Society, residing or practicing in the Northwest district as designated above shall constitute the membership of this Society.

Article V.—Executive Committee.

The officers of this Society shall consist of:

1. A President.
2. A Vice President.
3. A Secretary-Treasurer.
4. A Councillor.

Their duties shall be the same as are ordinarily delegated to such officers. They shall be elected by ballot at the annual meeting to serve one year or until their successors are elected.

Article IV.—Executive Committee.

The officers of this Society shall constitute an executive committee and as such shall transact the business of the Society, furnish places of meeting and arrange programs.

Article VI.—Meetings.

The meetings of this Society shall be held on the first Friday evening of each month except July, August and September.

The annual meeting shall be held on the first Friday evening in the month of June.

Special meetings may be called by the executive committee at their own discretion.

Article VII.—Notification of Meetings.

The programs, time and place of meetings of this Society shall be published in the official bulletin of the Chicago Medical Society.

Article VIII.—Papers by Invitation.

The executive committee may invite distinguished members of the profession or scientists, who are not members of this Society, at any time on subjects germane to the profession.

Article IX.—Quorum.

Three members shall constitute a quorum.

Article X.—Amendments.

These by-laws may be amended or changed by three-fourths affirmative vote of the members present, at any regular or special meeting, provided that the proposed change had been announced at two different meetings.

Louis J. Pritzker, Official Reporter.

DuPage County has been organized by making it a branch of the Chicago—Cook County Medical Society. Dr. Fred H. Bates, of Elmhurst has been elected a member of the sub-committee. It is believed that the 41 members of the profession in this county will speedily come into line under this arrangement.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 9. }

Springfield, Ill., February, 1904.

{ SUBSCRIPTION
{ \$3.00 A YEAR.

ABDOMINAL PAIN IN PLEURISY AND PNEUMONIA.*

BY JAMES B. HERRICK, M. D., CHICAGO.

That a disease in one part of the body may call forth painful sensations in another part, is a matter of every day observation. Pain in the knee may mean hip-joint disease; the passage of a renal calculus may make pain in the testicle or penis; a gall-stone may cause pain referred to the neighborhood of the angle of the right scapula; pain in the neck or left arm and hand may indicate angina pectoris and coronary sclerosis. While in pleurisy and pneumonia the pain is usually referred to the chest and to the side affected, it may be referred to points remote from the site of the disease, as to the opposite side or to the abdomen. This fact had not escaped the keen observation of our forefathers in clinical medicine. Laennec† speaks of the pain of pleurisy as sometimes shifting its place and "Occasionally," he says, "from the beginning of the disease, we have a stitch on the right side and pleurisy on the left." Gerhardt also reports this fact. Huss‡ treated of this subject, explaining the pain on the other side by the occasional anastomosis of right and left intercostal nerves. Barnard§ who has lately written of abdominal pain in pleuro-pneumonic diseases cites Andral, Watson and Fagge as clearly recognizing the fact that severe abdominal pain might have its origin in the pleura and be misleading unless care were exercised in the physical examination. While several articles have lately called attention to the danger of confusing pulmonary and pleural diseases with peritoneal, this danger is not touched

upon by many writers on diseases of the chest or abdomen, nor has it among practitioners of medicine and surgery the general recognition that it deserves. But the subject is well worth emphasizing. For in these days, when even the recent graduate stands ready to attack the appendix of every individual, the moment there is right iliac pain, tenderness and rigidity, with fever, the seriousness of a mistake in diagnosis in a case of this sort is plain. This then is my excuse for presenting a subject that is not new.

The lower six intercostal nerves—the anterior divisions of the dorsal nerves—supply the abdominal wall as well as a part of the parietal and diaphragmatic pleura. An irritation, e. g. from inflammation or pressure, in the course of one of these nerves might readily cause a pain that would be referred to the distribution of this nerve, i. e. to the abdominal wall. In cases of pleurisy how much of the irritation is produced by true neuritis is perhaps uncertain. By many, intercostal neuritis is regarded as of common occurrence in pneumonia and pleurisy.‡ The eleventh nerve is distributed over the iliac region. Pain here would easily make one think of the appendix if on the right side, or if on the left, perhaps of the rarer left sided appendicular pains. The other nerves would cause pain referred to the umbilical, epigastric or hypochondriac regions and the confusion that might result when we think of the possible significance of such pain in the way of ulcer of the stomach, gall-bladder mischief, pancreatitis etc., is clearly seen.

This close anatomical nerve connection between the abdominal wall, the pleura and the intercostal muscles is indicative of a physiologically intimate relationship, clearly

*Read at 53d Annual Meeting, Chicago, May 30, 1903

†Laennec, Treatise on Diseases of the Chest, etc., Forbes Trans. p. 450.

‡Deut. Archiv. f. kl. Med. IX.

§Barnard, "The Simulation of Acute Peritonitis by Pleuro-pneumonic Diseases," London Lancet CLXIII, August 2, 1902, p. 280.

*Fraentzel Ziemssen's Encyclopedia Amer. Trans. IV, P. 632, inclines to the view that was held by Beau that Intercostal Neuritis is a common accompaniment of Pleurisy.

seen in the common function of the thoracic and abdominal muscles in the act of respiration. Hilton's well known law declares that the interior of a joint, the muscles moving the joint and the skin over the muscular insertions are supplied by the same nerve trunks. This law also applies to the pleura, which, he says, can be compared to a joint. And the muscles to be regarded as moving the joint are not alone the intercostals but the abdominal as well†. Not only may pain of pleural origin be referred to the abdomen, but in their effort to lessen pain and to give the joint i. e., the pleura, rest, the muscles remain quiet and may even be tense. One can readily understand how the tenseness of abdominal muscles added to pain may be deceptive because of the close resemblance to the phenomena of abdominal disease. And how strikingly like the picture of abdominal inflammation may be the combination of pain and rigidity when chilliness, fever, rapid pulse, etc., are also present.

There is still another possible explanation of some of the abdominal disturbances that are seen in pleurisy and pneumonia. The phrenic nerve in its course through the chest lays itself open to the attack of a pleurisy involving the pericardial, diaphragmatic or costal surfaces. This nerve is not solely motor. Henle, Lushka, and others regard it as a mixed nerve. VanGehuchten§ says that in its course it gives off sensory fibres to the pericardium and to the pericardial, costal and diaphragmatic pleura, its terminal filaments furnishing sensation to the peritoneum covering the inferior surface of the diaphragm.

Irritation or inflammation of this nerve as in pleurisy may perhaps be an explanation of some of the cardiac and gastric disturbances, the collapse and meteorism because the phrenic has communication with the vagus and the splanchnics. The halting movement of the diaphragm as well as pain referred to the epigastrium and hypochondrium may likewise be due to phrenic dis-

turbance. Hampeln* advocates this view quite strongly, overlooking too much, as it seems to me, the part played by the intercostals in the production of abdominal pain.

It is not necessary to assume in cases of this sort that the inflammation is in the diaphragmatic pleura, i. e., in the part of the pleura anatomically nearest to the abdomen though undoubtedly this part of the pleura is often inflamed. Rohrer† calls attention to the frequent occurrence of inflammation of the diaphragm itself and believes that to this is due in part the stitch pain as well as the pain in the abdomen often complained of, especially in children.

Head§ who has done so much to explain referred visceral pain believes that in certain cases there may be abdominal pain when the lung alone is involved without the pleura, e. g., in bronchitis, tuberculosis or bronchopneumonia. He says that through the communicating branches of the seventh, eighth and ninth dorsal nerves, which branches supply the lungs, impulses originating perhaps in a small inflammatory pulmonary focus may be carried up to the posterior root ganglia. From the abdominal wall normal impulses pass from the epigastric and hypochondriac regions to these same ganglia. If, through the abnormal impulse coming from the lung, the ganglia have become disturbed in their function, the normal impulses from the abdomen may be distorted, i. e. misinterpreted, into painful impressions. Head tells Barnard (Barnard loc. cit.) that he has seen cases of this sort.

Whatever may be the correct explanation of this abdominal reference of the pain in thoracic disease, the fact that such pain may occur should be clearly recognized by both physician and surgeon. While infrequent, it is more than a curiosity, and it is not so rare that it does not deserve a place in the symptomatology of these diseases. I wish by brief reference to cases that have come under my own observation and then by reference to the experience of others, to show that this pain may occur, that it may be a mis-

†Hilton, Rest and Pain, Reprint of second edition, p. 252.

§VanGehuchten, Systeme Nerveux I, p. 460.

*Hampeln, Zeitschrift fur Klin. Med. XLV, p. 448.

†Rohrer, Maryland Medical Journal, September, 1902.

§Head, Brain, 1896. Also, Brain, 1900.

leading symptom, but that by care it generally permits of a correct interpretation.

In the pneumonia of children, abdominal pain is common. The sudden onset with severe pain, fever and vomiting, with the tenderness and distension of the abdomen, make the resemblance to local or general peritonitis striking. A year and a half ago I was called by two physicians to see a child of three to decide as to the advisability of operation for appendicitis. The history was, as I have stated, sudden abdominal pain, vomiting, high fever, tympanitic and tense abdomen. Yet the cough, expiratory grunt and rapid respiration were plain, as were the physical signs of consolidation of the left lower lobe. Later a pneumococcus empyema developed, healing under drainage. In this case, as so often happens to us all, the attention had been riveted on the part of the body in which the brusque initial symptoms had appeared, and the later symptoms of trouble in another part of the body, though plain to one new to the case, were thus overlooked.

The lobe involved to produce this pain is not necessarily the lower lobe. February 22, 1902, I saw with Dr. Klein a girl of seven years, whose pneumonia began with vomiting, pain and tenderness in the right iliac region, temperature 103° and in whom Dr. Klein found the next morning signs of consolidation of the right upper lobe. A typical pneumonia with high fever, 106°, and migration to the middle lobe followed. At the time I saw her the upper and middle lobes alone were solidified. The same abdominal pain in a left upper lobe pneumonia was present in a six year old child seen with Dr. B. H. Chamberlin, March 12, 1902. The mother described it as "cramps in the bowels." In these upper lobe cases the explanation of the reference of the pain to the abdomen may be that of Head, of Hampeln, i. e., through the phrenic nerve, or that the pleurisy and accompanying neuritis may be more extensive than the anatomical boundaries of the lobe that is solid, i. e., may involve the lower intercostal nerves.

While in conversation with physicians I have found some who expressed surprise at, or even unbelief in, the onset of pneumonia with sharp abdominal symptoms, I have

found many who regard abdominal pain as an important early symptom of pneumonia in children. Some writers on pediatrics are silent regarding that point. Others clearly recognize it, e. g., Baginsky, Hensch, De-Mussy and Bouveret. Holt* refers to it explicitly in the following words:

"The pain is frequently referred to the loin, the epigastrium or to any region to which the intercostal nerves are distributed. In a recent case, in a boy of seven years, for the first twelve hours there was intense localized pain in the right iliac fossa, associated with such extreme tenderness as to lead to the suspicion that the case was one of appendicitis."

This will be the proper place, I think, to say a few words concerning pleurisy and pneumonia, coincident with or following, abdominal disease. Coincident with, or following an appendicitis, a pneumonia or pleurisy may appear, the abdominal and thoracic disease both due to the same cause, e. g., the pneumococcus, or the one being secondary to the other. Gussenbauer showed that from thrombosed veins accompanying intestinal obstruction embolic pneumonic foci could appear in the lung. And lately Sonnenburg† has fully discussed the similar embolic origin of pneumonia met with during appendicitis, before or after operation. These cases in which the abdominal pain is accompanied by, and probably due to, definite abdominal disease, do not properly belong in the category of those I am considering. But I mention them as in a given case the possibility of the coexistence of both abdominal and thoracic disease must always be kept clearly in mind, a condition not at all infrequent in tuberculosis, carcinoma or general septicemia.

A few months ago I was called to see a girl of about five years, who was regarded as in too weak and desperate a condition to undergo an operation for appendicitis and peritonitis from which she was said to be suffering. The case was certainly a puzzling

*Holt, *Diseases of Infancy and Childhood*, second edition, 1902, p. 563.

†Sonnenburg, *Lungen-complicationen bei Appendicitis*, Archiv. für Klinische Chirurgie, Bd. 68, p. 468.

one. I was able to demonstrate clearly an extensive consolidation of the lower right lobe and a portion of the lower left. This had not been overlooked by the physicians. The respiration, temperature, mental condition were suitable for pneumonia. But a severe initial and continuous abdominal pain, a rigid, somewhat tympanitic abdomen and a persistent vomiting made the peritonitis seem probable. Yet careful inquiry into the history showed that within twelve hours of the onset the respiration rate had been 52. Palpation also led me to question the existence of a peritonitis, for with care, and by gentle, steady pressure, it seemed to me that there was less tenderness and less real rigidity than were consistent with the supposed extensive peritonitis. This case, illustrated too, I believe, the truth of Barnard's observation that there is a yielding or softening of the abdominal wall at the beginning of each inspiration in these cases where the pain is of thoracic origin. Medicine and food by the stomach being stopped for a few hours, and opium given, the vomiting ceased. There was in a few days a marked improvement in all respects. But convalescence was slow, with some cough, dullness and râles and signs of delayed resolution. No pus was found by a needle in a suspicious area in the right chest. During this convalescence, for a few days the patient had a distinct rigidity of the lower abdominal wall. A complete recovery ensued, the illness lasting altogether about seven or eight weeks. I am inclined to regard the case as primarily and even solely pneumonic. Yet it is possible that there was here a simultaneous infection of the lung and the peritoneum, or the peritoneum may have been involved after the lung or vice versa. The slow convalescence with persistent abdominal pain was present in one of Richardson's cases. (Case II.)

Turning now to adults, we find that they may exhibit though less frequently, the same abdominal pain with pleurisy or pneumonia and this may simulate a peritonitis. A young man of about twenty, with sudden abdominal pain and fever had some rigidity in the right iliac region. His physician with whom I saw the case found here a mass

concerning whose exact nature he was somewhat in doubt. The possibility of appendicitis was naturally thought of. But he gave a dose of calomel, the mass disappeared and in twenty-four hours a right lower lobe pneumonia was clearly made out.

I once showed a man in clinic at the County Hospital with right iliac pain and marked friction rubs over the right chest. He had escaped an operation for supposed appendicitis only because he refused to permit it. Several times patients have been sent to the surgical wards from the examining room with the diagnosis of appendicitis when the more careful ward examination by the surgeon has shown the case to be pneumonia. I know of an instance in Chicago where the abdomen was opened for supposed appendicitis—when the whole trouble was a pneumonia unrecognized at the time of the operation but which had caused symptoms that had been regarded as those of appendicitis. I could cite several other cases in which abdominal pain has been a prominent feature in cases of pleurisy and pneumonia sometimes leading to perplexity as to the correct diagnosis. Thus a woman of 37 years with right pleural effusion told me that her trouble began twenty days before with a pain in the "stomach and side." In another case severe pain just above the crest of the ilium and in the anterior axillary line was present for two days before definite signs of pneumonia could be made out.

Dr. Bevan in October, 1901, operated for me on a patient with acute appendicitis draining a small abscess due to gangrenous perforation of the appendix. There was a slow but apparently complete recovery. From April to June, 1902, the patient was at her work as a nurse. About June 15, 1902, she had pain in the right chest, temperature 99° to 100°. To this she paid little attention, but she became greatly alarmed when she had pain in the old region, i. e., at the side of the scar of the operation. Neither Dr. Bevan nor I could find local evidence for suspecting any recurrence of trouble in the region of the appendix. We thought the pain was referred from the chest in which could be clearly made out a pleural friction and the signs of a small

amount of fluid. Within a few days all abdominal symptoms cleared up.

Still another case I may mention. A young lady with a large carbuncle of the upper lip and with the grave constitutional symptoms attending it—the condition is as is well known generally due to the staphylococcus and often fatal—developed a severe pain in the right chest. In the latter location a friction rub with a fine crackling râle and a patch of harsh respiration could be made out. Nothing but the pain over the region of the appendix could be found suggestive of appendicitis, at least to Dr. N. S. Davis, Jr., and myself who both saw the patient several times, though to some the probability of appendicitis seemed strong because of a coincident sharp pain in that region. The embolic pneumonic focus was evidently the explanation of the pain. There was ultimate recovery, the later history proving no appendicitis.

Twice I have seen pain referred very accurately to the region of the gall-bladder and the patients in both instances were sure there was cholecystitis, a natural interpretation, perhaps, when we consider that the one patient was a medical student and the other a physician, noted for being poor judges of their own ailments. The student had a right sided pleurisy. The physician in addition to the pain had fever, local tenderness, and was jaundiced. He naturally concluded that he had gall-stones and cholecystitis though the whole trouble was clearly, as the sequel proved, a right lower pneumonia. In this case the pain was pretty definitely located at the point where the tenth rib joins the costal arch, close to the crossing of the parasternal line and the tenth rib, the *bouton diaphragmatique* of some writers. It should be regarded as suggestive of pleurisy, especially of the diaphragm, when this spot is the seat of pain or tenderness upon pressure.*

The following case was a great puzzle. A patient whom I saw with Dr. F. S. Hartmann was, after nearly two weeks, convalesc-

ing from an acute rheumatism and alcoholism when he was seized with a sudden excruciating pain in the upper left quadrant of the abdomen. Dr. Hartmann found him tender to pressure in the left hypochondrium; he soon vomited and became tympanitic. He did not, however, go into collapse immediately after the onset of the pain, and there was no marked perturbation of temperature. Three days later when I saw him, the tympany was less, the vomiting persisted and was grumous, there was an extensive pleurisy to be made out over the left chest, with a dullness and harsh breathing suggestive of pneumonia. The patient was rapidly failing and died a few hours later. While no positive diagnosis was ventured by either Dr. Hartmann or myself, we both looked upon the pleurisy as probably secondary to some sub-diaphragmatic lesion—perhaps hemorrhagic pancreatitis or localized peritonitis from an ulcer of the stomach. The autopsy made the next morning by Dr. H. G. Wells, revealed nothing in the abdomen to explain the symptoms except a high grade of gastritis with submucous ecchymoses. Capillary oozing explained the blood in the vomitus. The left pleura was, however, the seat of an acute inflammation especially well marked over the diaphragm. The lung was oedematous and congested with several hemorrhagic areas the size of a hickory nut. The blood showed a pure growth of a bacillus of the colon-typhoid group. Its exact nature was not discovered owing to an accident to the cultures though the study of the organism as far as carried out made it seem probable that it was the typhoid bacillus. Here was a case where the diagnosis should read as follows: Acute alcoholism, acute inflammatory rheumatism, typhoid (?) bacteriemia, acute pleurisy involving the diaphragm.

These cases will illustrate, I think, the importance of this occasional symptom of thoracic disease. That my experience is not unique I know from conversation with other physicians, and a few illustrative citations from the writing of others will be convincing on this point. Janeway* says he has

*Hampeln loc. cit. p. 455. Zulzer, Munch. Med. Wochenschr. 1893, No. 47. Fowler and Godlee, Diseases of the Lung, p. 670.

*E. G. Janeway remarks on some of the Conditions Simulating Appendicitis and Periappendicular Inflammation, Medical Record, May 26, 1900.

several times been consulted in cases of pleurisy or pneumonia, where because of the neuralgic pains reflected over the lower right abdomen, there has been entertained the idea of an operation for appendicitis.

Osler* says that twice in cases of pneumonia he has seen the suspicion of appendicitis raised because of the sudden acute onset of the pain, once in the region of the navel and once lower down on the right side.

In discussing typhoid perforation** he says: "Abdominal pain of a severe character in typhoid fever may be associated with an acute pleurisy."

This abdominal pain due to pleurisy I once saw in a typhoid. Because of its sudden occurrence and because of a sudden jump in the leucocytes my interne had naturally suspected perforation. Yet an absence of rigidity and of local tenderness and the presence of a fine pleural friction, with harsh localized breath sounds led me to wait, and the autopsy two days later showed no perforation but a broncho-pneumonia.

Fraentzel† saw two cases of pleurisy that closely resembled peritonitis.

Cozzolino§ refers to four cases reported by Massalongo last year in which cases abdominal pain in children had aroused suspicion of peritonitis though the trouble was intrathoracic. Cozzolino's own case was in a child of three years with symptoms like those of appendicitis including tenderness over McBurney's point, though palpation that was "*dolce, lenta, graduale*" showed little pain and no induration. Next day pneumonia was plain. Guinon‡ also in his case found that gentle pressure with the flat hand and not the finger revealed less tenderness and less resistance than the previous complaint of the patient, a thirteen year old girl, would indicate.

Morse§§ reports three cases in children, one

*Osler, Practice of Medicine, fourth edition, p. 117.

**Osler, Lancet, Feb. 9, 1901.

†Fraentzel. Article on Pleurisy. Ziemssen's Encyclopedia, American Translation, IV, p. 63.

§Cozzolino Gazette degli Ospedali delle Cliniche Nov. 5, 1903.

‡Guinon Revue mensuelle des maladies de l'enfance XIX, p. 167.

§§John Lovett Morse, Annals of Gynecology and Pediatrics, Nov. 1899, p. 143.

of which was called appendicitis and another gastritis though pneumonia was in each case, as the later history showed, the cause of the abdominal symptoms. He says, "within a few years, the abdomen has twice been opened in children by well known Boston surgeons, for appendicitis when the trouble was lobar pneumonia."

Brewer* reports an operation for appendicitis in a woman thirty years old, the abdominal pain, more or less general abdominal tenderness, slight muscular rigidity and distention, with leucocytosis leading to this diagnosis. The abdomen was opened but no sign of inflammation was anywhere discovered. The examination of the chest a few days later revealed a circumscribed pneumonia of the right lung, though prior to the operation there were no abnormal chest findings. Two weeks later and after the fever had subsided a small abscess immediately beneath the anterior abdominal wall of the left side, was opened. Brewer thinks that the pneumonic focus had induced the early abdominal symptoms.

He cites another case. A man convalescent from an acute lobar pneumonia, after being free from fever for six days, complained of pain in the right iliac region, vomited and developed fever. As he had years before had what was called appendicitis, a recurrence was naturally suspected. Muscular rigidity and tenderness became marked, the temperature rose, tympanites was extreme and the diagnosis of peritonitis was concurred in by Drs. Janeway, Bill and Brewer who saw the patient with his physician, Dr. Evans. Because of the desperate condition of the patient an operation was regarded as inadvisable. The autopsy showed a normal peritoneum, a resolving pneumonia of the lower lobe of the right lung a pneumococcus septicemia. How much of the abdominal pain and other symptoms was due to the pneumonic trouble and how much to the septicemia, it is impossible to say. Yet I cite the case here as an instructive one and as showing the ease with which peritonitis can be simulated by other conditions.

*Geo. E. Brewer: Some Errors in Diagnosing Conditions Resembling Appendicitis. Annals of Surgery, May, 1901.

Barnard's (loc. cit.) six cases in which abdominal symptoms were prominent though no abdominal disease was present, deserve to be quoted in full, but lack of time will prevent this. These were cases of pleuropneumonia involving the base of the lung. In two a pyo-pneumothorax developed, in each case apparently from rupture of a tuberculous focus in the apex of the lower lobe. One was a traumatic pleurisy with broken ribs. In this case the pleurisy was plainly recognized, but so definite were the abdominal signs that the abdomen was opened and found entirely normal. The most interesting of these cases and one which, as Barnard says, was a most perplexing one, concerned a chlorotic girl of seventeen under treatment for ulcer of the stomach. A sudden violent epigastric pain, vomiting, collapse, rapid pulse, temperature 104.5° F., a tender abdomen, especially in the epigastric region, led to an almost immediate operation for perforated gastric ulcer. Nothing of the sort was found. On the second day after admission a right basal pneumonia was clearly made out, later also in the left base. The autopsy showed double basal pneumonia and right diaphragmatic pleurisy and "in the stomach a shallow ulcer of the size of a six-penny piece, which was not even near perforation. There was no peritonitis." Surely this was a hard case to diagnose. As Barnard says, the sudden rise of temperature should have excited suspicion of something else than perforation.

Hampeln's* (loc. cit) five cases are also worthy of careful study, he dwelling not only upon the possible misleading character of the referred pain but upon the vomiting, tympany, collapse, etc., that he explains on the theory of disturbance of the phrenic nerve with secondary disorder of the vagus and splanchnics. Surgical intervention in some of these cases was narrowly escaped and only because Hampeln's experience had led him to examine with unusual care for thoracic trouble. Hampeln's cases were, to quote his own resume "two fatal cases of foudroyant pleurisy, one of seropurulent pleurisy with recovery, one fatal and one favorable case of croupous pneumonia, all in the beginning of the illness creating the

impression of a peritonitis or intestinal obstruction while the ordinary marks of the real disease were absent and even the physical examination, at least at the beginning, was negative." (loc. cit., p. 450.)

M. H. Richardson* discusses in a very frank manner the possibility of mistaking acute thoracic disease for appendicitis, citing instructive cases. He makes out the error in diagnosis as often due to the fixation of the thought of the observer on the one part of the body or on the one disease. Arguing from a psychologic standpoint, he says, "For a true perception of the normal relation of things to be temporarily suspended, it is only necessary that the mind for the moment be dominated by a fixed idea. Influenced by a single suggestion or by a chain of suggestive circumstances, the mind may become so possessed of a certain idea that the result will necessarily be distorted and incorrect." How true this is we all know to our sorrow, in more than single instances. I referred to this point in speaking of the child on whom operation was contemplated for appendicitis. The minds of the two physicians had as Richardson says, become dominated by the fixed idea of appendicitis, though pneumonia was plainly recognized by both as soon as the possibility of its existence was pointed out. Barnard says the opinion that in his case of traumatic pleurisy there were abdominal complications was largely due to the fact that a few weeks before, with a somewhat similar injury and symptoms, there had been rupture of the spleen with hemorrhage. Their minds were drawn, therefore, toward the possibility of a duplicate of this somewhat rare occurrence.

There is little to say in conclusion. Cases may occur in which at first it may be impossible to say whether the trouble is abdominal or thoracic. Each case must be judged on its own merits and the decision as to immediate operation or waiting, not settled by any hard or fast rule. Certainly in some doubtful cases with threatening abdominal symptoms, it would be better to err on the

*Richardson. Remarks on the Diagnosis Between Acute Appendicitis and Acute Intrathoracic Disease. Boston Medical and Surgical Journal, April 17, 1902, CXLVI, No. 16.

side of operation and make a laparotomy than to let a possible ruptured appendix, gall-bladder, stomach or intestine go untreated for six or twelve hours. An exploratory abdominal incision could, perhaps, be made under local anaesthesia or under laughing gas. This would avoid the danger of adding bronchitis, or aspiration pneumonia to an already existing pulmonary inflammation if such happened to be the primary trouble and the peritoneum is found normal. If peritoneal trouble is found ether or chloroform anaesthesia can be added and the reparative surgical procedure instituted.

But with care and circumspection doubt will seldom arise. The main safeguard in the diagnosis is to think of the possibility of a thoracic origin for the abdominal symptoms. It will then be generally found that there is some thoracic pain as well as abdominal, or there will be cough or expiratory grunt, perhaps a bloody or rusty expectoration, or the respiration will be increased out of all proportion to the abdominal pain and tympany, or, as in Barnard's case, the temperature will rise too suddenly and too high for the supposed abdominal accident. These facts if observed, will lead one to a careful examination of the chest which will, in most instances, even early, reveal some loss of motion, friction, râle, dullness or bronchial breathing that discloses the existence of an intra-thoracic inflammatory condition and makes it clear that the abdominal pain is a reflected one. The abdomen in these cases is often pseudo-tender. A light touch hurts. Quiet, steady, deep palpation with the flat hand does not increase the pain. And, as Barnard observes, at the beginning of inspiration there is a yielding of the abdominal wall that is seldom seen in true peritonitis. With care, then, most of these cases can be recognized. I need not repeat what I said at the beginning that this recognition is important. That truth is self evident.

I may add that in this paper I have made no reference to other reflections of the pain of pleurisy and pneumonia, e. g., to the neck or to the lumbar region. Nor have I thought it wise to extend the scope of the paper so as to include such thoracic diseases as pericarditis, aneurisms, tumors, vertebral tuber-

culosis, etc. I have purposely limited myself to a consideration of the abdominal symptoms, chiefly pain, in acute pleurisy and pneumonia, believing that this is the form oftenest overlooked or misinterpreted.

Discussion.

Robert H. Babcock, Chicago: The admirable paper to which we have just listened is so impressing that any additional remarks might seem to be a work of supererogation. Nevertheless, it might be well to add a few words because of the importance of the subject. It reminds me forcibly of the instructions given us students in Munich by the late Professor Ziemssen to the effect that, whenever called to see a case, no matter what appears to be the nature of the difficulty, the careful physician will never fail to make a thorough examination of the thoracic organs. This is a rule which should always, I believe, be borne in mind. In many cases, however, even such a careful thoracic examination may fail to give one positive information as to the source of the abdominal pain as stated by the author of the paper. This is true because, as repeatedly stated in the paper, signs of pneumonia or pleurisy especially pneumonia, are not always discoverable early. Dr. Herrick said repeatedly, in citing cases, that a day or two afterward signs of pneumonia were discovered. Now, it is well known that although pain may be an early sign in pneumonia, it often precedes positive signs discoverable by a physical examination by a good many hours. I have seen many such cases and recall distinctly one impressed on me years ago; a young man of 15 in whom the initial epigastric pain and vomiting were strongly suggestive of abdominal disease, and in whom the signs of pneumonia did not develop for nearly 36 hours.

Only the day before yesterday I saw a child of four in whom everything seemed to point to an abdominal affection, and, indeed, a physician only the day before had stated positively that the condition was one of intestinal toxemia, and yet a careful examination of the chest disclosed unmistakable evidence of pulmonary disease which it required only more careful investigation to demonstrate as the sole source of the abdominal pain.

If, therefore, physicians will bear this rule in mind, that in any apparent acute abdominal affection they should be very careful to go over the thorax, and conversely, if in cases of disease of the thorax they will go over the abdomen carefully, they will often obtain information of which they would otherwise still be ignorant.

I recall the case of a young man in whom an empyema of the right side had ruptured through the lung and was supposed to be the sole difficulty; on examination it was found that the empyema was the result of a previous appendiceal abscess which occurred many weeks before. The physician should be exceedingly careful in making a diagnosis in these cases of obscure abdominal pain.

Charles L. Mix, Chicago: I think that so important a paper as the one we have had the pleasure of listening to ought to be discussed

rather generally by the members of the Society. The author limited himself, as he said, to pneumonia and to pleurisy, and left out the cases of pericarditis described by Simpson and others in which there is also an associated abdominal pain. It seems to me, however, that it would be wise to bear in mind the very frequent association of abdominal pain, even on the right side, in cases of pericarditis. It sometimes happens, as in one case of which I am cognizant, that in pulmonary tuberculosis associated with pleurisy this same mistake is made and as a consequence a diagnosis of appendicitis is made. I have in mind the case of a physician who had a pulmonary tuberculosis on the right side associated with pleurisy. It was well known that he had a condition, but a sudden attack of pain in the region of the appendix lead to a diagnosis by a surgeon of appendicitis. Another medical man called in on the case in consultation absolutely refused to concur in the diagnosis but in spite of his protest the surgeon operated and found a normal appendix. The surgeon admitted prior to operating that pulmonary tuberculosis and pleurisy existed.

Lichtenstern, in his article on influenza in Nothnagel's System, mentions two cases of pulmonary influenza, influenza in which the pulmonary symptoms predominated, in which the patient complained of severe pain in the right inguinal region. In one case the pain was so peculiarly localized and apparently characteristic that for a period of twenty-four hours he was inclined to the diagnosis of appendicitis, and he confesses that the case almost went to operation. The exceptions which were given by the essayist as to the cause of this abdominal pain may be supplemented by Lichtenstern's article.

The neuralgic nature of abdominal pain was touched upon by the speaker. The point was made that light touching or stroking or palpation of the abdominal wall causes a great deal of pain, whereas deep palpation did not. Lichtenstern explains the pain in his two cases as being due to a neuralgia of the ilio-pneumogastric nerve, which, of course, is sufficient to account for the condition. It seems to me that this is an important differential point. In these cases of supposed appendicitis deep palpation does not bring forth any marked increase of the pain; whereas light palpation causes a great deal of increase in the pain if it is a reflected abdominal pain.

J. A. Johnson: The paper was of unusual interest to me because of a case under my care at the present time and which I was first called to see on the 27th of March. The patient, who is a physician, made a diagnosis in his case of typhoid fever. As doctors are noted for making poor diagnoses in their own case I took the liberty of examining him thoroughly. He had a temperature of 102 degrees F.; pulse 99; respiration 36. The patient complained of absolutely no pain in the chest, but said he had a severe pain in the right iliac region, and also a very sharp pain in the left hypogastric region. There was neither expectoration nor cough, but he had a sort of a hiccup or belch that occurred quite frequently. He also had had nausea for three weeks before I saw him.

A careful examination of the chest elicited nothing further than a flat percussion note on the left side, and the absence of respiratory murmur and vocal fremitus. It was to me a most puzzling condition. A tentative diagnosis of pleurisy was made which was corroborated by aspiration. We aspirated the left pleura and withdrew three liters of sterile serum from that cavity. This case had been an exceedingly interesting one to me in connection with this paper from the fact that there were at no time any subjective symptoms of pleurisy. The patient had not complained of the usual pain in the side that we expect in pleurisy. The percussion sounds were absent on account of the effusion.

Following the removal of the fluid he made a slow recovery, passing immediately after the withdrawal into a pseudo-typhoid condition, and although no examination was made of the fecal passages, I do not doubt but what the typhoid bacillus would have been found had the stool been examined. Two very eminent men in this city examined the patient four days before a diagnosis of pleurisy was made and recommended rest and nothing more.

Clark Gapen, Madison, Wis. (by invitation): I presume that we all come in contact with these cases of deflected pain, and they are often a great puzzle. My method of differentiation is as follows: I go on this theory; that there are two elements in this pain; one is the direct element which originated in the affected tissue, and the other is the reflex element. If you will carefully set about relieving the pain you will find invariably that the reflex pain will disappear first. For example, if you give a small hypodermic injection and repeat it from time to time, it has been my experience that in the majority of cases the reflex element disappears and unmasks the cause because the inhibition of the reflex pain is affected more easily than the inhibition of the direct pain.

This brings to my mind a story that was told by Dr. ——. It is said that when he was a young physician the Queen of Sweden was very ill. The doctors called in in the case all disagreed. Finally this young physician was called in consultation. He said, "My idea is to relieve this suffering and then let us go on studying the case," and I think that every practitioner, especially the young practitioner needs to learn that—to relieve the pain first and then go on and study the case.

Dr. Herrick (closing the discussion): I have nothing to say in conclusion except, perhaps, to state that I think that the use of opium in these cases oftentimes obscures the symptoms instead of clearing them up.

ALIMENTARY PUTREFACTION.*

J. W. HENSLEY, M. D., PEORIA.

Under this head I shall not attempt to embody the whole field of alimentary conditions leading to the decomposition of sub-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

stances in the Gastro-Intestinal tract. The etiology of alimentary putrefaction may be due to what is taken into the digestive channel from without—or to local disturbances or disease within. It would take volumes to include all that may lead to and contribute towards fermentation and putrefaction of alimentary substances in the *Primæ Viæ*—during the efforts of mastication, digestion and assimilation—so I shall make no attempt to embrace the entire pathogeneses belonging to this subject, nor can I include the whole *pabuli* of alimentation.

Leaving out decomposition arising from obstructions and occlusions of the digestive channels—and that arising from organic glandular disease of liver, pancreas, or kidneys together with tubercular and cancerous affections within the abdominal cavity—simplifies my subject—yet leaves more still—than I can attempt to handle. By the exclusion of the conditions mentioned, mechanical as it were, in a pathological sense—I do not wish to be understood as leaving these entirely out of the question of gastro intestinal antiseptis. To do this—would be to weaken the possibility of disinfecting—or rendering antiseptic—that which may exist in the alimentary passage way. While it may be easier to prevent putrefactive elements from being taken in from without—than to correct that which is due to pathological conditions of an organic or reflective character within—I shall hold to the doctrine that it is possible to at least disinfect the contents of the alimentary tract—so as in the main to at least modify if not entirely control fermentation or putrefaction—more especially so when idiopathic in character or causation.

The exciting cause may lie in the ingesta—but the pathogenesis belongs mainly to defects within. To determine wherein and whereat—lies the non-physiological conditions leading to decomposition of a putrid character—demands the cleverest discrimination. The selection and limitation of foods and remedial measures best adapted to the case—depends upon what is the matter. The nervous system has much to do in such cases. “What’s one’s meat is another’s poison”—applies with greater force in the defective di-

gestive phenomena—than from custom or individual idiosyncrasy. The diagnosis then becomes the chief determining factor. Discrimination and differentiation are eminently important. It should be borne in mind that fermentation and putrefaction are not synonyms—and should not be so considered. Chemically speaking—(Hemmeter says)—“Fermentation should be applied only to decomposition of carbohydrates, and putrefaction to the breaking down of proteids or albuminoids with a formation of malodorous substances.” With the latter intoxicating poisons mingle in the metabolism of the epithelial cells—insinuating toxins in the intestinal follicles—which when sufficient to overcome the resisting powers of the system are absorbed—giving rise to symptoms which may be severe enough to induce auto intoxication or self originating toxemia. Hence auto intoxication has suddenly sprung into existence as a synonym of infection by toxicoemia.

With such conditions existing locally—abundant gases may be generated and a great variety of bacteria inhabit the neighborhood. The food ingesta coming into such abnormal conditions on its passage through a long tortuous canal—with a temperature favorable—becomes contaminated—and a most favorable medium for the propagation and habitation of micro organisms—many of which delight to feed upon carrion—if such indeed are not the originators of the very carrion itself.

When the alimentary contents become thus converted and diverted—fermentation or putrefaction becomes a natural result. Impaired digestion from such conditions may readily result in putrid decomposition, with greater or less auto-intoxication—and does—unless active intestinal peristalsis promptly moves the offending mass on to its exit. The cause may not primarily belong to the food itself—as before suggested—but this when ingested indiscriminately—may add much fuel to the flame, when favorable local conditions already exist. Usually in the more acute stage we have simply carbohydrate fermentation—giving rise to malodorous gases—such as the hydrogen—car-

bondioxide and marsh gases. The butteric—succinic and other offensive gases also spring from this source. These conditions may exist—while at the same time putrefaction is going on—hence arises the confusion because of the blending of fermentation and putrefaction. In fact—while abnormal fermentation may exist without putrefaction—it is doubtful whether the latter exists without the former. To determine more accurately as to the predominance of these two conditions—analyses by chemical and microscopical measures may be brought into play. The natural senses however—being strengthened by cultivation and clinical experience—will usually detect the difference—between fermentation and putrefaction—as to predominance and mischief. To conclude that abnormal fermentation is due to—or has its basis in, the hydrocarbonates and that putrefaction emanates from the proteids, is to draw a very fine line of chemical demarcation, in the selection of a discriminating diet. Yet in the essential this conclusion is based on facts in a general sense—when applied to the ingesta—where chronic conditions already exist—tending to either fermentation or putrefaction or both combined. That proteid alimentation favors the formation of putrescin and other toxalbumins—there is no question. Neither can there be a question as to the discovery by microscopical, chemical and other analyses of the specific and other distinctive gases belonging to putrefaction. On this point I shall not presume to deny the *de novo* origin of intestinal infection by bacterial septicemias. Bacterial pathology is the modern idea—yet there is no necessity of believing that every inflammation or every septicemic condition is of bacterial origin. These are unsettled questions—being as yet theoretic rather than positively pathogenic except in a few instances.

In determining the origin of putrient compounds and their systemic contamination—analytical chemistry has had much to do. While I hold—that our fathers and very remote great grandfathers in medicine, knew more than is given them credit—I must uncover to the more recent scientists—Geolo-

gists and Naturalists—who in their researches in behalf of evolution have gone so far as to discover, that away in the snow clad Alps—and still on to the constantly frigid regions of the north—flowers similar to those of temperate regions and in the tropics, exist in miniature—with all their beauty of form—variety and color. This is fine indeed! That all nature is alive—both the organic and hitherto inorganic is becoming microscopically assumed. Of course every cell—and every molecule of the normal human economy is alive—while in a pathological sense—this same economy is intensely alive bacteriologically, considered. While I believe that man has greater powers than have ever been awakened—and that next to the great Creator Himself—he—man—is a Creator—endowed with possibilities yet dormant—sufficient to make a world—yet he is limited and subject to retrogradations—therefore cannot advance to the uttermost.

By relying upon and putting into operation—artificial means of diagnoses—the doctor of medicine is liable to diminish his natural powers of discrimination—thereby weakening his confidence for speedy action. Our ancient brother found it not so difficult to trace out diseases and apply the remedy as we may suppose. He relied on his natural senses, cultivated and brought to a point of astonishing accuracy by practice and experience. Our natural powers are lapsing and becoming atrophied for want of use. While I would not decry the value of the microscope, nor denounce Bacteriology—in the progress of Medical Science I do verily believe—too much stress is confided in these by the present generation. The changes being made in and additions to the nomenclature of pathological conditions and microorganisms at the present day are confusing and misleading, if not indeed frightful. Yet it behooves us to fall in line—or at least lend a friendly ear to investigation—rather than settle down in the ease of the indifferent pessimist. "What is to be—will be"—has no place congenial or helpful in researches after the truth. If one has a certain time to die—irrevocably fixed—then our art is limited—being only palliative.

We are in the main—able to determine as to alimentary putrefaction by our natural senses—strengthening these by experience and practice—we may usually be competent to discriminate as to causes and points of infection. Since the very fact of the existence of putrefaction is open to our senses—history—symptoms—subjective and objective may point out the etiology—pronounce the pathology—and suggest the remedy. By subjective and objective evidences—every means accessible must be applied to draw forth the facts. The cause—prophylaxis and cure may require closer analyses—and the aid of finer discrimination than the natural senses can bring to bear—even when advanced to the highest state of cultivation. But first let me say—let us not neglect the God given powers that lie within our automatic selves—thus suffering these to lapse into a state of dormancy—if not to a condition of positive atrophy—thus rendering us less prompt—less confident and less able to meet the emergencies of our profession. In offering a paper on any subject—before an intelligent body like the Illinois State Medical Society—composed as it is—of some of the ablest expounders of medical science in the world—it becomes the duty of the essayist to present the best there is, bearing on his subject. One naturally is timid in risking his own convictions when counter to generally recognized authority—even though such authority rests almost or quite wholly on hypotheses. This in a measure takes away individuality and leads to plagiarism rather than originality. Positive pros and cons are too often indulged in by our profession. For one to say yes—and another no—as to any proposition yet under trial—is to weaken both professional and public confidence. Just now—the investigating medical world is in controversy—regarding the possibility of disinfecting the alimentary tract—therefore to deny or confirm rests on pessimistic presumption.

When gastric flatulency exists with great disturbance and commotion in the gastric region—followed by sour eructations or vomiting—we have what is commonly denominated—a sour stomach—and this is gastric fermentation. In the event that

spontaneous or induced emesis or stomach lavage relieves the case—it is but rational to conclude that the fault was in the stomach only—and usually due to something in the ingesta when acute—or because the general system is at fault—physically or mentally. If on the other hand—the symptoms extend into the bowels as well—followed by fermentative diarrhoea, the case may be cholera morbus, cholera infantum, diarrhoea, dysentery, cholera nostras or cholera asiatica. These conditions are usually fermentative—with the child—especially when continued, as resulting from cholera infantum—the acute fermentation—passes into putrefaction, with auto-intoxication and death—unless by antiseptic and proper alimentation—the poisons may be eliminated—while the child is tided over the climax—followed by a well guarded convalescence.

In the chronic forms of gastro intestinal, disturbed and imperfect digestion, when the dejections are of putrescent odor and when particles of undigested food are found in the dejected matters—we conclude at once and correctly too, that alimentary intestinal putrefaction exists. Headache, lassitude—fever—diarrhoea or constipation—with urine loaded with toxines are some of the symptoms. When the absorption of harmful ptomaines from the alimentary tract—reaches a certain point, as against resisting powers—delirium results—and this is the symptom of profound auto-intoxication, as exemplified in Enteric fever. The treatment of gastro Intestinal putrefaction of contents—should be prophylactic, dietetic—hydriatic, physical—psychical and medicinal. The diet should be selected according to symptomatic conditions presenting—and as have been determined by trial. The avoidance of foods most liable to fermentation and putrefaction is first in the order of proscription. Therefore we may say—proscription precedes prescription, in the order of advised treatment—hence what not to do is first—and what to do is second.

Certain animal foods, fish and vegetables, naturally even when fresh, are inclined to speedy decomposition when subjected to a temperature of equal degree with that of the

body in normal health. Meats already beginning to smell, as we say, fish, oysters and such are very frequently prepared and eaten raw or only partially cooked, after decomposition has already begun. Even when thoroughly cooked, it is a mistake to believe such diet is harmless. Cabbage, sauerkraut, turnips, sour milk, rancid cheese, and stale eggs are among the foods most readily decomposing in the alimentary passage way. The cold storage eggs are nearly always in a stage of beginning decomposition when sold in the markets. To me they are offensive, and as I believe unfit for food.

It is well known that, persons subject to even mild digestive disturbances have to exclude some of these from their diet—though in very good general health, being well—but painfully nourished. It is true also that some nationalities or individuals can by habit tolerate decaying foods, that would be highly poisonous to others. For instance it is said the Chinese relish eggs that are so decomposed that they are blackened and would be horribly obnoxious and noxious to the rest of mankind. That certain foods may be agreeable to one and toxic to another—both in health and disease, needs no discussion. Juices expressed from fruits readily ferment when subjected to a temperature equal to the interior of the human body. For this reason very little or none of the fruits so agreeable and healthy in normal conditions can be born by the dyspeptic who suffers from fermentation—whether gastric or intestinal, especially gastric. To prevent the fermentative and putrescent processes of alimentary substances, therefore requires care in the selection, preparation and ingesta of the same. It is quite generally believed that dry eating is most healthful. This doubtless arises from the fact that foods moistened by drinks so as to require no mastication before swallowing, are deprived of the saliva which is an essential element in the chemistry of stomach digestion. By the designs of nature the alkaline saliva needs to mingle with the acid gastric secretion, to secure healthful gastric digestion. Still further the ptyalin of the saliva has important bearings in the chemistry of intestinal

digestion. Yet how little these important facts engage the attention of the profession in general or are even thought of by the laity, is astonishing and lamentable.

It behooves us to know the elements of physiology, before venturing far in the labyrinthian domains of pathology. It being a fact that the hydrochloric acid in the gastric secretions tends to prevent harmful fermentation—the dilution of this constituent is disturbing and may be seriously harmful under two conditions. First, when normal in quantity, second, when deficient. This would imply, that ordinarily, in health, an abundance of liquids at meals, may act injuriously on the processes of stomach digestion by retardation. And when there is a deficiency of the Hcl. it stands against reason, to destroy its antifermentative digestant powers by further dilution. It may not be thought of that the stomach absorbs liquids but slowly, when not thirsty, yet this is an important fact. When digestion is continuously tardy—under ordinary conditions—dilatation of the stomach walls may be suspected. This may be physically evidenced by measurement of internal capacity, and by external tracing of outlines. Stomach splashings however, furnish a usual guide to any considerable stretching and thinning of the stomach walls. Owing to gormandizing, and the modern great quantities of beer and other liquids taken into the stomach, we are not surprised that its walls are stretched and that from this cause tardy and disturbed digestion is so often met with. At first the braced up powers may compensate the change, but finally like an over stretched heart cavity, the strength by hypertrophy gives way to the weakness of dilatation. I wish to especially emphasize this point, for herein lies the most frequent seat or beginning of Alimentary putrefaction. The tardiness of stomach digestion per force naturales, leaves a residual of the ingesta lingering back, which may be from meal to meal. This residual undergoes decomposing changes until finally in passing below, the whole of the contents of the alimentary tract are contaminated. There being a diminution of the protecting and emulsifying secretions

from the stomach glands when the walls are weakened, it has long been the practice—and not without reason or effect—to supply the defects by administering the two leading elements of normal gastric juice, hydrochloric acid and pepsin. Then to overcome flatulency—cardialgia—fermentation and decomposition—a multiplicity of remedies are resorted to.

The antidecomposing chemicals are most rational and most relied upon. Herein too—come the proper selection of food, and the extending of the length of time between meals, so reasonably indicated. Two meals a day and these 12 hours a part—have served me splendid results in many cases—especially with out door patients—whose labors are not essentially physical. During the time of carefully selecting a diet suited to each individual case, and fixing the time or intervals for taking nourishment, together with the aids given by medicines, in supplying chemical defects, the fact that motor insufficiency exists, must not be inconsiderate. This applies to both stomach and bowels. Without proper motility—there can be neither healthy secretion—nor perfect digestion. As said elsewhere—it is doubtful if persistent alimentary putrefaction—or the absorption of ptomaines—sufficient to cause systemic toxicohaemia can take place when stomach and intestinal peristalses are normal. It follows then that when the intestinal walls are in the state of atony, from whatsoever cause, the passage of alimentary substances and the completion of the digestion and healthful assimilation, are both tardy and defective, and that these sluggish conditions are most favorable for putrefaction—and such a condition usually exists when putrid decomposition is found. On this point it is well to observe—that excessive gastric acidity, does not imply hyperchlohydria, at all times. Neither does the souring of stomach contents imply, necessarily, an absence of the HCl. Abundant acetic acid and increased lactic acid—play the important part in gastric—undue fermentation. Besides other gases are freely generated when the hydrocarbonates are in a state of fermentative decomposition, as stated before.

By these disturbing forces the antifermentative Hcl. is overcome. Flatulency, cardialgia, sour eructations, with heart depression etc., are some of the symptoms. These symptoms are greatly exaggerated and prolonged, when chronic dilation exists, weakening normal protective secretions and motility. To discriminate as to leading disturbing elements, furnishes the key to remedial measures. Bear in mind always, that hyperchlohydria—does not necessarily exist—when free hydrochloric acid is found. There may be a lack of chemical affinity—demanding foods that more readily combine with this particular digestive element.

Then to arouse the latent powers, both secretive and motor, stimulation and tone stand first in the order of the treatment. Alimentation, that can be best digested because of its character and because of its stimulation of secretory and motor functions, along the whole digestive tract, should be well studied and intelligently selected. To aid this and supply the defective elements, should be the thought and practice. Intra gastric douches are well borne and beneficial to some, especially so—when chronic gastritis exists. But as a rule the stomach flushings are of doubtful utility. At least that has been my experience, except for temporary relief. A cup of very hot water, with or without the addition of a small amount of chloride of sodium or calcium—sipped as hot as possible, an hour or so before breakfast—will do as well or better in nearly all such cases, as the flushings by the syphon. This method will loosen the excessive mucous from the stomach walls when taken hot, and induce peristalsis—just as well as flushings and drawing off by the stomach tube. Then when it passes into the bowels below—it has appeared to do no harm, but rather favors bowel action, soon after the morning repast is taken—which I have not found the tube douchings to do so well. The hot water with the chlorides taken in this way—VanValzah claims—will control the tendency to butyric fermentation which is quite common — unless counteracted — where chronic catarrh of the stomach exists.

We can only make a rational selection of the diet to begin—and then be governed by

continued clinical observations. The same rule applies to all physical remedies, drugs or chemicals—used in the treatment. There is no other class of ailments—that requires and admits so great a variation of experimentation, both as to aliments and internal medication as do chronic gastro intestinal diseases. In fact—experimentation in these complaints—strengthened by observation and practice—is the guiding star.

The test meals as laid down by Hemmeter, Ewald, Boas, VanValzah and others, and as used or rather pretended to be used by the sanitariums—such as at Battle Creek, are of doubtful utility—except in very complicated conditions, where differentiation, is in point of dispute—and of emergent consequence. Even then, such tests cannot be made positively confirmatory, hence are as a rule only suggestive to experimentation. In pursuing the treatment of intestinal putrefaction and resulting auto-intoxication, the idea of disinfecting the bowels by some intestinal antiseptic has naturally engaged the attention of the faithful investigator. The French scientists have been enthusiastic on this subject, led by Bouchard, Dujardin-Beaumetz. On the other hand the Germans have declared that the practicability of disinfecting the contents of such a mass, throughout so long a canal—rests upon a very infirm basis. On this—see the writings of Boas—Hans Herz and many others. Then again Albu devotes a volume to this subject, considering it a pathological entity of the same importance as inflammation. It seems to me that experience and scientific research should largely settle this question. Just why such emphatic pros and cons should exercise the promulgations of scientific investigators, is humiliating and a travesty on analytical science itself. Like on many other matters—the German scientists advance theories—the French promulgate experimental facts—for they have had their great master, Pasteur. Then it is said the Englishman is an egotist, and rests on his greatness, while the Yankee is optimistic—his principle—being to prove all things before espousing or denying anything. We are either Americans by nativity or adoption and happy that we are such. Any way the

spread of the auto-intoxication theory is wide, and the practicability of gastro intestinal antiseptics in dispute—notwithstanding Bardet's publication against it—and in favor of intestinal antiseptics. It is my opinion—formed by experience and to me on rational grounds, that the intestinal contents and mucosa can be rendered antiseptic. At least to an extent favorable to the prevention of the putrefying of alimentary matters, and that on this basis we should direct the diet, physical efforts, psychical impressions and medical treatment. Hemmeter says, "While it is true that intestinal disinfection is still an unsolved problem, efforts in this direction should be encouraged, because we may be able thereby to attenuate the pathogenic inhabitants of our intestines and render them less virulent." This is a happy medium clothed in scientific—technical language—showing progress and hopefulness.

In our efforts—in tracing out the cause of continuous alimentary putrefaction—it is well to always make careful and occasional urinalyses. While this may not by any means furnish a guide to the actual cause of the trouble—it, in many instances will furnish strong circumstantial evidence as to the mischief going on. Of course I cannot dwell on this here—but offer it as a suggestion of no little importance. Dr. Harry Adler has said that "No painstaking physician will treat a chronic intestinal disease without a previous analysis of the urine." With this I fully agree. Bouchard lays much stress on this also. I make it a practice to always know something regarding the urinary secretion before venturing far in the diagnosis and treatment of chronic intestinal disease of any kind. It is well to make more than one urinalysis, in such cases, as we proceed. In fact I believe it good practice in such cases to anticipate abnormal conditions of the blood and urine—and prescribe some of the Lithia Salts or other diluents from the beginning. The portal circulation, and elimination also require more than passive attention in such cases. In the way of antiseptics alimentarius the mercurials no doubt take the lead. It is astonishing what results are secured by a 10 gr. dose of

mild chloride of mercury—where acute fermentative diarrhoea exists. Or what is perhaps preferable—from 8 to 12 doses of 1/12 or 1/10 of a gr. of calomel and a small amount of sodium bicarbonate with bismuth sub-nitrate or subgallate, given every hour until effects are produced. During the second stage of dysentery and cholera infantum—where ulceration or sloughing is going on, with putrid smelling discharges—I have found nothing better than minute doses of bichloride of mercury—continued right along—with but short intervals of suspension, until convalescence is assured. Especially in epidemic dysentery—is this good practice. In the second stage of this disease—very offensive feces will most usually improve in odor and consistence in 24 hours under such treatment. If not—the prognosis may be set down as almost certainly unfavorable—unless a favorable turn may be brought about by heroic doses of ipecac.

Admitting that it is practicably impossible to reach into and behind all the intestinal folds—so as to at once disinfect the contaminated materials there concealed and shut in by the intestinal follicles and lying beneath the epithelium—from which emanate the toxic ptomaines which when sufficiently absorbed, result in self poisoning. Yet it must be conceded that most of the offensive matters can be cleared away and the greater part of the intestinal mucosa rendered clean and aseptic by combined efforts in correcting digestive defects above and colonic flushings from below. Only by degrees and a persistence of effort can we hope to finally—by such measures, overcome chronic pathological conditions leading to alimentary putrefaction as it lies in the colon.

Regarding the further pursuance of this subject I invite attention to a careful study of acute transitory auto-intoxication—poisoning by tainted meats. Chronic dilatation of stomach—chronic intestinal dyspepsias—disturbances arising from the ravages of the colon bacillus, and more especially to defects at duodenal region—ulceration, catarrh and obstructions at coecum pouch, vulnerable points in colon and diseases of the rectum. Concerning a more specific line

of treatment tending toward gastro intestinal antiseptis—it is my purpose to supplement this paper with another later on. Just now, incidentally—I will say that the importance of this subject is of greater weight than is generally considered. Abdominal and pelvic surgery is the fad of this generation. The digestive functions play an important part as to cause and ending of lesions demanding the surgeon's scalpel. The general practitioner—first encounters these lesions. It is for him to study and correct defects of a dangerous tendency in their incipient periods if possible. It is he who as a rule first diagnoses and decides as to the advisability of surgical procedure. It behooves him to be ever on the alert. The patient relies on him, and expects him to be abreast of the very best extant in the management of his case. He—the patient—dreads to be cut—and pleads for conservatism. He believes his doctor will protect him to the uttermost. Then should he, the family doctor, fail to do and advise for the greatest safety of his confiding patient, the confidence is shaken and the brittle cords may be broken—leaving the good family doctor morally culpable. It is argued on the part of the surgeon that in all cases of pain in the abdominal regions—of any apparent consequence—the physician should at once associate a surgeon with him in attendance. On the other hand—have we ever heard the surgeon say—that in all cases of contemplated surgery—the family doctor should be associated in the case from the beginning to the end? If the first proposition is sensible—and I am becoming more and more convinced that it is measurably so—then the second is but reasonable—and doubly so. These propositions imply—necessarily, competency and deliberation on the part of both physician and surgeon. Therefore gastro intestinal antiseptis both as to alimentary functions and asepsis on the part of operative procedures go hand in hand. Auto-intoxication from within will baffle the success of the surgeon—more readily than septic poison from without. Then further and above all else—dyscrasias—constitutional—belong to the family doctor and should remain under his supervision. It is because of these reasona-

ble conclusions that the family doctor of medicine—refuses to surrender all to the surgeon—be he neophyte or sage. And it is because of this necessary association of the family physician and local or outside surgeon—that the family physician is entitled to and demands a liberal share in the remunerative fees accruing from the business in which each is morally if not criminally responsible—regarding the outcome. The surgeon's time is devoted to discriminating points of differentiation in diagnosis and to the technique of operation. His knowledge of constitutional acute disease and general therapeutics is limited. On the other hand the general practitioner embraces the whole field of hygiene, aetiology, pathology, prophylaxis, materia medica, local or constitutional defects, and as a rule the peculiarities or idiosyncracies of the patient. To tell when to cut—when not to cut, and how to cut is the surgeon's business. To save the patient's life before and after surgical operation—rests mainly with the physician. Therefore let each take his rank and maintain his position in the great battle against the enemies of the human species.

The list of gastro intestinal antiseptics includes besides the mercurials, boracic acid, carbolic acid, charcoal, creosote, iodoform, naphthalin, potassium iodide, potassium permanganate, chloride of gold and sodium, iodide of sodium, pepsin, bismuth citrate, sub nitrate, subgallate and salicylate. The sulphocarbolates, turpentine, and numerous other chemicals and drugs, have their value as intestinal antiseptics. The mercurials, naphthalin, charcoal and sulphocarbolates, with the bismuth compounds and plenty of the pepsins and peptenzyme are most efficient however. The peptenzyme I have recently found to render favorable results when the defects were in the duodenal regions.

For intestinal fermentation or putrefactive conditions, nitrate of silver stands well. When there is periodic hepatic engorgement, chloride of gold and sodium, taken continuously for weeks or months may serve an excellent purpose. For a careful study of this subject I refer the reader to Hemmeter's diseases of stomach and his two recent volumes on intestinal diseases, together with

VanValzah's diseases of stomach and others as referred to in this essay. Bouchard's work on auto-intoxication in diseases as translated by Thomas Oliver is a most excellent little volume that should be in every practitioner's library.

DISLOCATION OF THE TARSAL BONES ANTERIOR TO THE ASTRAGALUS, (SUB-ASTRAGALOID), TOGETHER WITH A PARTIAL ROTATION OF THE ASTRAGALUS ON ITS AXIS.*

BY J. F. PERCY, M. D., GALESBURG.

John J., age 16, while riding a horse the 24th day of last December (1902) injured his right foot. It occurred through the falling of the animal on a slippery pavement, carrying his rider with him. When I saw the case, as I did within five minutes, I made a diagnosis of dislocation of the astragalus.



Fig. 1.

When the case came to operation I revised my diagnosis as follows: Dislocation of the

*Read in the section on surgery before the Illinois State Medical Society April 30, 1903.

tarsal bones anterior to the astragalus (sub-astragaloid) together with a partial rotation of the astragalus on its axis.

The first part of the diagnosis was easily made before the operation. To determine the rotation of the astragalus, even with the aid of the X-Ray, was impossible. The portion of the foot anterior to the os calcis and astragalus was moved outward nearly an inch and a half. The astragalus could easily be felt under the internal malleolus. To the touch there was a very deep depression through the soft parts under the external malleolus. Unfortunately this could not be well brought out in the photographs which



Fig. 11.

were made just after I had finished examining the case.

(See figures 2 and 3). A depression could be detected also between the internal malleolus and the astragalus. Below this a shelving off of an inch or more under the astragalus, due as mentioned above to the pushing outward of the bones anterior to the os calcis and astragalus, was noted. The foot could easily be everted; indeed the ligamentous attachments on the inner side were entirely destroyed. This was true in such degree that on everting the foot a flail like joint was the first impression given. The foot could not be inverted. In attempting to reduce the dislocation no crepitation could be elicited. The horse in slipping fell on its

side, carrying the rider with it, and the patient's foot was evidently bent under the body of the horse. This will account for the outward dislocation. The patient assured me that the animal did not step on his foot.

No help was gained from the use of the X-Rays, except to confirm the diagnosis made before the operation. One of the reasons for my failure to successfully reduce the bone by manipulation, is beautifully shown in the illustration (Fig. 4) prepared



for me by my assistant, Dr. Reppert. In this the astragalus is shown thrown beneath the tendon of the flexor longus hallucis.

The patient was removed to the hospital and ice poultices applied until the next morning, when under ether an inverted Y incision was made three inches in length, extending from the dorsum of the foot downward over the inner malleolus at an angle of forty-five degrees. (See illustration No. 1). On exploring the underlying structures, it was found that the astragalus had been turned over on its side so that the tibial articulation pointed toward the inner side

of the foot. This in part explains the lack of success when the attempts at reduction were made.

It would have been utterly impossible to replace this bone in its normal relationship to the parts by any form of manipulation. When cut down upon, it was found to have become merely a foreign body because it had been forcibly separated from all of its ligamentous attachments. This is very well shown by the specimen which I have present for your inspection.

The partial rotation of the astragalus just mentioned, sufficient of itself to prevent the securing of a useful foot, was still further augmented by another factor. I refer to the entanglement of the bone in some of the ten-

it cannot be replaced by manipulation, and if it is entwined with a tendon the same statement holds good.

The line of incision to which I have already referred, served me very well in this case. It is less extensive than the one usually recommended in the text books, viz., that of the incision for Syme's Amputation. It was necessary to cut but one tendon, that of



Fig. IV.

dons of the foot, in this case the tendon of the flexor longus hallucis. Attention is called to this because, from theoretical reasoning at least, it would seem that this must explain the cause of the always painful and often useless foot which follows this accident. When this bone is rotated and carries with it one of the tendons, or is displaced beneath one of the tendons as was true in this case, any motion which calls into play the function of the displaced tendon will move the bone and thus keep up a continual irritation of the tissues surrounding it and interfere greatly with the functions of the foot. For this reason the treatment of dislocation of the astragalus cannot very well be other than surgical. If the bone is rotated

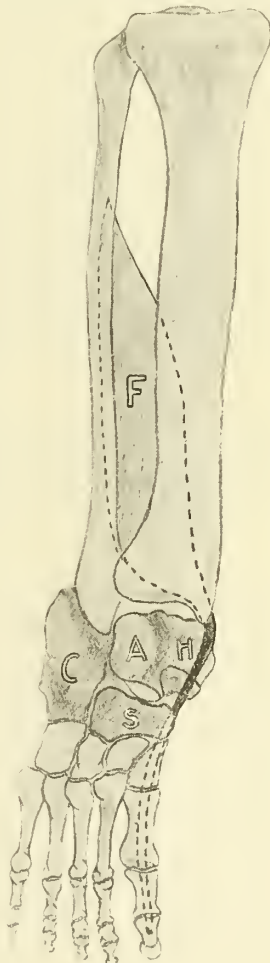


Fig. V.

the flexor longus hallucis already mentioned. This was reunited as soon as the astragalus was removed.

In closing I beg to call attention to the following:

That sub-astragaloid dislocation of the foot is extremely rare.

That when combined with rotation of the astragalus on its axis the accident is unique.

That this condition in this case was not produced by a fall from a height, as was true in the majority of cases so far reported in the literature.

That this accident usually means not only a painful, but also a useless foot.

That to restore the parts to their normal relationship by manipulation is excessively difficult, and as above, to leave them unreduced is disastrous. "So that in this rare injury it is better to etherize; then to manipulate; then perhaps to make a few cautious incisions, and subcutaneously to divide some of the apparently resisting parts. If those things fail, it is wiser to really excise the bone than to leave it in its false position."

That this is good advice is demonstrated in the case here reported. Although but little over four months has elapsed since the operation was made, the foot already bids fair to be quite as useful as the one not operated.

Addendum: At the present time (November, 1903) there is no appreciable shortening of the limb on that side, and no interference with the normal functions of the operated foot.

New Incorporations.

New Incorporations have been licensed by the Secretary of State at Springfield as follows:

La Grange Diuretic Mineral Water company, Chicago; capital, \$1,000; deal in mineral waters; incorporators, Philip L. Schirmann, Augusta Schirmann, Oscar C. Schirmann.

Revel Remedy company, Chicago; capital, \$10,000; object, manufacturing patent medicines; incorporators, Almer H. Adams, Asa G. Adams, A. F. Piper.

Lane's Guaranty Remedy company, Chicago; capital, \$1,000; manufacturing drugs and medicines; incorporators, Marcus G. Vincent, Katie Horn, Marvin A. Bettman.

Reed Remedy company, Rockford; capital \$100,000; manufacturing drugs and remedies; incorporators, E. A. Reed, C. E. Grave, B. S. Huckins.

International Serum Toxin company, Phoenix, Ariz.; capital, \$1,000,000; capital in Illinois, \$10,000.

Dr. R. H. M. Mackenzie's Medical and Surgical offices, Pittsburg, Pa.; capital, \$100,000; capital in Illinois, \$5,000.

Mrs. Frank Leslie Spear company; location, Chicago; capital, \$10,000; object, manufacturing toilet preparations, medicines, and appliances;

incorporators, Mrs. Frank Leslie Spear, W. D. Bennett, Henry A. Mix.

Chicago Home for Convalescent Women and Children, Chicago; benevolent; incorporators, H. N. Higinbotham, F. E. Coyne, Heaton Owsley.

College of the Science of Being, founded by Ursula N. Gestfeld, Chicago; teaching of the science of being.

Illinois Sick Benefit association, Chicago; benevolent; incorporators, Fred M. Smith, Charles E. Nathan, Harry A. Riley.

Mey's Chemical company, Chicago; capital, \$15,000; object, manufacturing proprietary medicines; incorporators, Charles A. Burgess, Hugh Hill, John P. Guest.

Marriages and Deaths.

Marriages.

Wilson R. Abbott to Miss Florence Nightingale, both of Chicago, December 17.

Frank Anthony, of Sterling to Mrs. Allie Sneed, of Dixon, December 26.

J. H. Banks to Miss Maude Wendell, both of Lincoln, January 12.

Jos. B. Bone to Miss Elodia Morris, both of Chicago, January 16.

Giovanni B. Bruno to Miss Marie Laforio, both of Chicago, January 18.

William Herring of Bushnell to Miss Edna Phleager, of Greenview, December 23.

Deaths.

Adams, J. C., Gridley, December 28, aged 55.

Andrews, Edmund, January 22, aged 80.

Bennett, R. F., Elgin, January 22, aged 77.

Bishop, Chas. W., Tinley Park, January 11.

Boetticher, Simon, Chicago, January 15, aged 35.

Chappell, W. H., Oregon, January 5, aged 55.

Damron, T. M. C., Vienna, January 2, aged 80.

Halstead, M. A., Jacksonville, Jan. 4, aged 65.

Hamilton, B. R., Nauvoo, December 9, aged 66.

Harper, W. R., Mitchellville, Dec. 7, aged 40.

Major, L. S., Austin, January 4, aged 81.

Owen, Chas. S., Wheaton, December 30, aged 46.

Tolman, Henry L., Evanston, aged 55.

BELLIGERANT PHYSICIAN.

Dr. Peter D. Spiron of 22 Blue Island ave., Chicago, a graduate of the National Medical college, class of 1898, is having troubles of his own. It appears that Martha Zwarg, his house-keeper, has brought suit for \$15,000 damages. The plaintiff alleges that Dr. Spiron pulled out her hair, threw a coal box and a cup of hot water at her, beat and kicked her, and administered "poisonous, noxious, and improper" drugs to her.

EPIDEMIC OF TYPHOID AT CANTON.

Canton, Jan. 23.—At a special meeting of the Canton board of health, stringent regulations have been adopted to stamp out the epidemic of typhoid fever, which has raged for several weeks. Surface wells have been ordered closed and public funerals and opening of caskets prohibited where deaths result from typhoid.

The Aesculapian Society of the Wabash Valley.

This Society is Composed of Practitioners of Illinois and Indiana Residing in the Valley of the Wabash River. It was Founded in 1846. Regular Meetings are Held in May and October. The Membership is 250.

OFFICERS:

T. N. RAFFERTY, Robinson.....	President
H. C. KERRICK, Brocton.....	Vice President
H. McKENNAN, Paris.....	Secretary and Treasurer
W. T. MOORHEAD, Terre Haute, Ind. }	
F. E. BELL, Mattoon.....	
E. S. ALLEN, Arcola.....	Censors
C. BARLOW, Robinson.....	
J. A. HOFFMAN, Pesotum.....	

The fifty-seventh annual meeting for the Aesculapian Society of the Wabash Valley.

The Society met in Paris, Ill., Oct. 29, 1903, in the rooms of the Commercial Club.

After the reading of the minutes and the adoption of the Treasurer's report the Society received the names of 15 applicants for membership.

During the day nine papers were read and discussed. At the annual Society dinner 75 physicians were present.

The officers were elected for the ensuing year.

The next meeting of the Society will be held in Danville, Ill., some time in May, 1904.

PRESIDENT'S ADDRESS.

W. K. NEWCOMB, M. D., CHAMPAIGN.

MODERN MEDICINE.

The term "Modern" as applied to medicine has come to be a much used word. So often indeed do we hear the expression "Modern Medicine" with such emphasis on the "Modern," that this or that physician practices modern medicine, or this or that procedure is in line with modern medicine, the comparison being so obvious between what is assumed to be modern medicine and all that procedure which is not accepted as modern, that a man beginning to feel old in the practice is moved to ask, how much of this clamor for modern medicine really deserves attention and how much is merely catch phrase?

Let us consider the relative standing, before the profession of what is accepted as modern

medicine and what, by way of contra distinction we might term ancient medicine.

The beginner accepts the complicated physiological developments of the day with the complicated pharmaceutical preparations of the manufacturing chemists as modern, and is apt to claim for any procedure he undertakes as being duly authorized because it is "the latest."

If a medicine or a measure smells of the musty past, no matter as to reliability or feasibility it is discarded because it is old and something perhaps far less valuable is accepted because it is new.

The older practitioner on the other hand holds tenaciously to the results of his bedside experience, and enters doubtfully upon any course not fully sanctioned by time-honored precedent; he may even ignore the united verdict of the modern profession regarding the value of a new measure and cling to an old method because it is old, time tried, and in his hands, generally successful.

Now to achieve the best results in the healing art, where shall we begin to prune this exuberant bush marked "Modern" and how much shall be retained from the sturdy tree labeled "Ancient?"

All true progress in medicine is indeed praiseworthy and should be encouraged, but in twenty years' experience how much have we seen that at one time was regarded as "authorized," now relegated to a well deserved obscurity because it did not stand the test of time. How many agents and operations that were the talk of the profession and the burden of the press that are now only mentioned with

a shrug and yet at that time we all accepted them as potent factors in what we were pleased to call modern medicine.

Ever since we knew anything of medical science the whole profession has been hurrying thirsty and eager after a wonderful mirage of great possibilities, of engaging probabilities, always fleeing farther and farther, ever pursued, never attained, still enchanting, still enticing "Modern Medicine," and when in the experience of each individual did the time come (for it always will come) when he halted for a time to consider seriously the flowing fountain of living truth which he well knew he was leaving behind.

In other words, when did the decision come, to adhere to the safety and security of successful measures, and sail no more on the great ocean of the untried.

During the last quarter of a century how many times have we been presented with a new remedy, a new toxine, a new operation, a new method, for which was claimed that most desirable of all attributes infallibility! How many uteri, ovaries and appendices have been sacrificed in this modernizing process, before the profession decided much was unnecessary and settled down to a commendable conservatism?

How many new remedies urged by the claims of thrifty manufacturers have been lauded to the skies only to find on mature deliberation that we already had something better.

Around and around the circle have we gone after the beckoning shadows until tired at last we returned to the shelter of our old original tree and practiced ancient medicine. It may be said that I do but voice the plaint of the older doctors, who find themselves left in the rear, when I urge you not to go too fast; that the wheels of progress are ever held by those who cannot keep their places, but I answer that all is not progress that is called progress; that all that is called modern medicine is not modern medicine; that some of it is ancient medicine in a new dress, some having already been tried and found wanting, and some is being tried without having the warrant of due experience or the sanction of common sense.

But the cry of the nations is onward, the clamor of the people is forward; the profession joins the halloo for progress and too many accept whatever is new as an advance. Often it is the reverse.

Too little consideration is given to that great volume of medical lore that has triumphantly stood the test of time and demands recognition, if it is old. Fundamental principles do not change. Hasty fluttering from bud to blossom is not becoming in the staid and sturdy followers of Esculapius, neither is it to the best interests of our most valued charges, our patients.

No progress is true progress that does not have for its inspiration the best interests of the patient. Hasty operating and premature medication cannot but harm both physician and patient. The former by developing lax and ill-advised methods of work, and failure to make those careful and considerate clinical observations so essential to the rational practice of medicine. In the latter it must ultimately undermine that confidence that should enter so intimately into the relations of the physician and the sick.

Already the man who reads the signs of the times and keeps his fingers on the lay pulse, may note a growing sentiment on the direction of safety. You may note that the query now is not so much for the modern man or the brilliant man, but the safe man and the best reputation for the young physician to cultivate today is that he is safe.

While youth urges progress, age counsels prudence. An era of experiment is followed by an era of conservatism. Instead of the clamor for "modern medicine," it will be "rational medicine," and today no maxim is more apt than that of this society: "The rational use of drugs and the exercise of common sense," and the mention of drugs brings another thought.

Among other things modern medicine has developed is what has been called "medical nihilism." Fortunate is the physician who still retains his confidence in the efficacy of medicine and is not over-impressed with the value of remedies new, to the exclusion of all that is old; who can conscientiously give a

dose of old fashioned medicine and confidently anticipate a therapeutic result.

Many men are looking for chemical reactions instead of watching clinical developments. Experience shows that no two patients show exactly the same effects from the exhibition of the same remedy and different physical conditions bring different results, even in the same individual.

The practice of therapy requires the same amount of common sense today that it always has required, and always will. The foundation principles of medical practice are as old as medical needs; their modernizing consists merely in their technical application and choice of method.

Your essayist firmly believes that many a patient is denied the comfort of a soothing sedative or a cooling febrifuge from the feeling of the physician that such measures are only temporizing, but any doctor who has enjoyed the luxury of a sick bed will not need to be told what a blessing is a few hours of rest, and how far it carries the patient on the road to recovery.

Then let us bring all the operative measures of modern pride, the new remedies of wonderful combinations and impossible formulas, the antitoxines of certain and doubtful utility, the ancient medical lore both active and obsolete, and let us write across the whole this axiomatic suggestion, "Be not the last to abandon that which is old nor the first to accept that which is new."

PUERPERAL SEPTICEMIA.

BY P. O. CARRICO, M. D., ASHMORE.

There is no subject in the whole range of obstetrics which has caused so much discussion and difference of opinion as that to which this paper is dedicated. The disease has given rise to endless controversy. One writer after another has stated his views of the affection with dogmatic precision, often on no other ground than his own preconceived notions and an erroneous interpretation of some of the post mortem appearances. One states puerperal fever is only a local inflammation, as peritonitis, others claim it to be metritis, metro-peritonitis, phlebitis, or

an essential disease which affects lying-in women only.

Fortunately, modern research is beginning to throw a little light upon the subject. The whole tendency of recent investigation is daily rendering it more and more certain that obstetricians have been led into error by the special virulence and tendency of the disease and they have erroneously considered it to be something special to the puerperal state instead of recognizing in it a fever of septic disease practically identical with that which is familiar to surgeons under the name of pyemia or septicemia. If this view be correct, the term puerperal fever, conveying the idea of a fever, such as typhoid, must be acknowledged to be misleading and one that should be discarded as only tending to confusion. Before discussing the reasons which render it probable that the disease is in no way specific or peculiar to the puerperal state, it will be well to relate some leading facts connected with it.

Hippocrates clearly recognized the possibility of its originating in the retention and decomposition of portions of the placenta. Although Harvey and other witnesses show they were more or less familiar with it, it was not until one and a half centuries ago that it came prominently into notice. At that time the frightful mortality occurring in some of the principal lying-in hospitals, attracted attention. That all recently delivered women present lesions of continuity in the generative tract through which septic matter brought into contact with them, may be readily absorbed has long been recognized.

The analogy between the interior of the uterus after delivery and the surface of a stump after amputation was particularly insisted on by Simpson and others. An analogy which was, to a great extent, based on erroneous conceptions of what took place since they conceived that the whole interior of the uterus was bared. It is now well known that this is not the case; but the fact remains that at the placental site, at any rate, there are open vessels through which absorption may readily take place. That absorption of septic material occurs through this channel is probable in certain cases in which decomposing material exists in the in-

terior of the uterus, especially when from defective uterine contractions the venous sinuses are abnormally patulous and are not occluded by thrombi. It is difficult to understand how septic matter, introduced from without, can reach the placental site. Other sites of absorption are, however, always available. These exist in every case in the form of slight abrasions or lacerations about the cervix or in the vagina, or especially in primiparae about the fourchette and perineum. There is even some reason to think that absorption of septic matter may take place through the mucus membrane of the vagina or cervix without any breach of surface.

This might serve to account for the occasional, although rare cases in which symptoms of the disease develop themselves before delivery or so soon after it as to show that the infection must have preceded labor; nor is there any inherent improbability in the supposition that septic material may be occasionally absorbed through the unbroken mucous membrane, as is certainly the case with some poisons. Hence there is no difficulty in recognizing the similarity of a lying-in woman to a patient suffering from a recent surgical lesion, or in understanding how septic matter conveyed to her during or shortly after labor, may be absorbed.

It is necessary, however, to suppose that absorption takes place immediately or very shortly after these lesions of continuity are formed, for it is well known that the power of absorption is arrested after they have commenced to heal.

The sources of infection are two, self-infection and infection from without. Any condition giving rise to decomposition, either of the tissues of the mother herself, of matter retained in the uterus or vagina that ought to have been expelled, or decomposing matter derived from a putrid foetus, may start the septicemic process. A common origin is the retention of coagula or of small portions of membrane or of placenta in the uterus, which have putrefied from access of air; or in the decomposition of lochia. The reason why self infection does not more often occur from such sources, as more or less decomposi-

tion is often present, is because the lesion of continuity, has begun to heal before decomposition has begun.

The sources of septic matter conveyed from without are much more difficult to trace and there are many facts connected with heterogenous infection which are very difficult to reconcile with theory and of which we cannot give a satisfactory explanation. It is probable that any decomposing organic matter may infect but some forms operate with more certainty and greater virulence than others.

One of these which has attracted special attention is termed cadaveric poison, derived from dissection of the dead, in post mortems and conveyed to the genital tract by the hands of the accoucher.

Erysipelas in all its forms, is another possible source of infection as has been observed in surgical hospitals where lying-in patients have been admitted.

There are reasons to believe that other zymotic diseases may produce a form of disease indistinguishable from ordinary puerperal septicemia and yet present none of the characteristic features of the original complaint.

Defective sanitary arrangements I feel sure may produce the disease. Exposure to sewer gas or any unsanitary connections with the lying-in room may cause a disease identical with septicemia. In some instances the unhappy property of carrying contagion has clung to individuals in a way which is most mysterious and has led to the supposition that the whole system becomes saturated with the poison.

Dr. Rutter of Philadelphia had 45 cases in one year, while none of his neighbor's cases were attacked. The nurse may convey the septic poison and is more likely to, than the medical attendant. Practitioners cannot always avoid coming in contact with patients suffering with puerperal septicemia, zymotic disease or offensive discharges and it is practically impossible to relinquish obstetrical work every time he is in attendance on a case from which a contagion may be carried. I do not believe it is essential in

these days when the uses of antiseptics are well understood.

The danger line is in neglecting the proper precautions. It is necessary even to urge extreme and even exaggerated care in this direction. The practitioner should accustom himself as much as possible to touch his patients with his left hand as that is not used in ordinary obstetrical cases. He should be most careful in the frequent employment of antiseptics in washing his hands. Clothing should be changed on leaving an infectious case. The patient should use antiseptics in washing out the vagina night and morning before confinement. The obstetrician should wash his hands in antiseptics immediately before touching his patient. The lying-in room should be antiseptically prepared so far as possible and all unnecessary baggage removed.

Symptoms generally show themselves within two or three days after delivery. Infection most often occurs during labor, or in cases which are autogenetic within a short time afterwards and before the lesions of continuity in the generative tract have commenced to cicatrize. The first symptom which excites attention is a rise in the pulse which may vary from 100 to 140 or higher even. The temperature will rise to 102 to 106, in some cases. In the more intense class of cases in which the whole system seems overwhelmed with the severity of the attack, the disease progresses with great rapidity and often without any indications of local complications. The pulse is very rapid, small and feeble with temperature very high, without marked remission in bad forms. There may be little or no pain or there may be tenderness on pressure over the abdomen or uterus.

As the disease progresses there may be intense tympanitis often forming a most distressing symptom. The countenance is sallow, sunken and has a very anxious expression. Intelligence, as a rule, is unimpaired, other times there is low muttering delirium. Diarrhoea and vomiting are very frequent occurrences. The tongue is moist and loaded with sordes, but occasionally gets dark and dry.

The lochia is often suppressed or altered in character with a very offensive odor. The breathing is hurried and panting. The secretions of milk is often arrested.

These symptoms may go on and within one week terminate fatally. If the patient goes on to recovery these symptoms modify themselves. These symptoms may last many weeks before restoration is complete.

TREATMENT: The views of the practitioner are naturally biased according to the nature of the disease.

1st. To discover the source of the poison in the hope to arrest farther septic poison.

2d. To preserve strength and vitality and 3d to treat any local complication which may arise.

If it be self infection the means of preventing farther absorption must be employed. Antiseptic applications should be used in the uterus and vagina. This should be used twice daily if coagula are suspected or an offensive discharge be present. Quite frequently the threatening symptoms rapidly disappear.

A solution of per-chloride of mercury 1 in 2000 is the most efficient antiseptic in destroying the spores of micro-organisms. Iodoform suppositories in the uterus or iodoform packing may be placed in the uterus. The disease being characterized by so marked a tendency to prostration, the sustaining of the vital powers by easily assimilated nourishment cannot be overrated. Give every hour or two some form of animal soup, eggs, milk and brandy or some nourishing food. Lessen the force of circulation without favoring exhaustion and diminish temperature. Five drops of the tincture of veratrum every hour until the pulse falls to 100, then two drops every 2 hours. Quinine in 10 to 20 grains is useful in reducing temperature, also salicylic acid in 12 gr doses is a very valuable antipyretic.

Perchloride of iron and strychnia to sustain strength. Warm and moist poultices or fermentations over abdomen. Turpentine enemata are serviceable in alleviating tympanitis. It is needless to say that it is impossible to have any fixed rule to manage all cases. Judicious treatment must depend on the

general knowledge of the physician and a careful study of the symptoms each case presents.

CONSERVATIVE SURGERY WITH PRESENTATION OF CASE.

BY JOHN WEIR, M. D., WEST UNION.

There are three conditions or classes of cases that I wish to bring up for discussion under my subject.

1st. Necessity of being cautious in giving advice in surgical cases.

2d. Make all necessary operations thorough and complete.

3d. Save all useful tissue possible:

In the first I desire to mention the unnecessary anxiety and worry of the patient, many times, caused by some unguarded remark of the physician. This is especially true in gynecological cases and those of a nervous or neurasthenic disposition. In all these cases we should always make a very careful examination and clear diagnosis. If we find there is actually a seriously diseased condition which demands surgical interference we should be positive in our advice and urge an operation at once, but if we find only a moderate amount of disease it is best to give nature a chance by waiting and advise the patient that she has no serious trouble at present. Instruct her to remain under the observation of a regular physician and report to him at any time there is indications of trouble and in that way she could have proper attention if any serious trouble should arise. At the same time give her to understand that she might never have any disease of sufficient gravity to need a surgical operation.

To illustrate: A woman about 40 years of age, has had a considerable uterine hemorrhage a few times, perhaps a small fibroma of slow growth, which may never prove serious or after the menopause may diminish in size. Do not tell her that she has a uterine tumor that may require a surgical operation. If you do she will be miserable to herself and everyone else and usually go into the hands of some advertising concern that cures (?) without the use of the knife.

The same is true only more exaggerated in neurasthenic patients. Thus the urgency of being cautious about advising our patients who have or suppose they have some surgical disease. Real or imaginary.

When a surgical operation, great or small, is needed, make it and make it thorough and complete.

If a patient comes with a beginning felon, incise freely at once do not wait for it to increase in size, which may result in a deformed or useless finger.

If osteo-myelitis of some of the larger bones, the greater the necessity of prompt and thorough operation. Neglect or delay or half way measures mean prolonged suffering and deformity or loss of limb.

I will present the following case as it shows the results of lack of sufficient surgical interference.

J. F. now age 19 years, had a sudden pain in right leg one morning when he was about 7 years of age. This continued to increase and became very severe with redness and swelling near and above the knee. Six weeks later a supposed abscess was opened just above the knee-joint. A drainage tube was used for some time. The boy was not able to be out of bed for 14 months. Pus continued to be discharged and there has been an open sore ever since, now nearly twelve years.

He was treated for rheumatism the first six weeks.

At present there is a fistulous opening at the lower, inner side of the thigh, through which a piece of dead bone protrudes nearly an inch above the surface of the skin. The outer end of this piece of bone is about one-eighth of an inch thick and three-quarters of an inch wide. The part below the surface of the skin is apparently much larger.

The leg is flexed upon the thigh at about 45 degrees. The limb is much shorter than the left one, so much so that he will always have to use a crutch.

If ischio-rectal abscess, operate early. Make free drainage and thereby prevent a fistula.

If cancer of uterus or any other part of the body make an early, radical operation

and benefit your patient. Delay or incomplete operation means a most horrible death.

In all surgical cases the radical or thorough operation conserves the part involved.

Save all useful tissue possible, should be our golden rule in surgical work. Frequently it is not best to save all the tissue possible. In amputations it is better to make a serviceable stump or one to which an artificial limb can be fitted. Therefore remove all tissue, which if saved, would interfere with the usefulness of the member implicated.

It is wonderful how much nature will do to repair an injury. In cases of doubt as to saving an injured organ, give nature a chance and if repair fails to take place, there will be time to exercise our skill.

We have descriptions of the various operations, given us in the text books but so very often the condition we find is so atypical that we must rely upon our own resources.

This is almost the rule rather than the exception. Especially of accidental injuries. In this kind of cases, when the patient's general condition is good and there is no complications demanding immediate action, we had better try to save the injured member by giving time for repair to take place, if there is any possibility at all of success.

I will present the following case to demonstrate some of the possibilities of repair where there is extensive loss of tissue.

Mr. C., age 16 years. Family history good. Personal condition, well developed, rapidly growing young man in good health and never been seriously sick.

April 7, 1902, had his right foot crushed by two wheels of a railroad caboose passing over it while fast in switch. I found all the superficial tissue including the first layer of muscles of the plantar region of the foot torn loose leaving the tendon of the flexor longus pollicis and flexor longus digitorum exposed. The external plantar artery was severed about one-half inch from the division of the posterior tibial into the external and internal plantar arteries. There was some contusion of the outer side of the dorsal surface of the foot.

As it was impossible to tell just what part of the injured member could be saved, we

cleansed the wound, tied the stump of the external plantar artery, sutured the wound and applied a dry antiseptic dressing and awaited developments.

A few days later we began using warm moist dressings, to try to keep up the life of the tissues and kept this up until the line of demarcation was well formed.

May 1st, 24 days after the injury we amputated the four outer toes about one-half to three-quarters of an inch anterior to the metatarso-tarsal joints, including the soft tissues of the bottom of the foot back to the heel and a large area on the top and outer side of the foot. Following the line of demarcation. Fortunately we were able to save the attachments of the Peronei, Tibialis Anticus and Posticus muscles. Therefore our hope of making a useful foot. There was no skin to use for flaps to cover the stump so this entire area was left to heal by granulation.

An island of skin 1 by 1½ inches just over the metatarso-tarsal joint of the little toe was saved, which aided greatly in the healing process. This also made an area of normal skin to help support the weight of the body when walking. This island of skin was attached to the deeper structures by only a small part of its undersurface. It soon closed down and became attached.

After the amputation we dressed the wound with an antiseptic dressing and continued to do so with the result of a useful limb.

After the first week following the amputation I used a salve of boric acid and petrolatum after irrigating the wound with bichloride of mercury solution 1 to 3000 in which I used a small quantity of carbolic acid for its sedative effect. This dressing was much less painful and much easier to change than the dry dressing. The wound was very painful for the first three months. The patient has been dressing the wound himself since Oct. 23, 1902.

The small area of granulating surface on the bottom of the foot could have been healed long ago by skin-grafting but the patient has not yet been willing to have that done.

TYPHOID FEVER.

 BY W. S. JONES, M. D., REDMON.

In presenting a paper on typhoid fever it is not our aim to exploit new remedies or pathologies, but to call attention to some things which we know already, but fail many times to apply to practical effect. We hope thus to bring out a wholesome and general discussion of this subject.

1st. If I were selecting an ideal patient for typhoid fever, it would be one with a good family history, medium flesh, temperate habits in all things, with a nice blending of the temperaments.

2d. The patient to be dreaded most is one with a tubercular, or syphilitic history or any without a good nurse who do not obey the directions of the physician.

Since we have been acquainted with the typhoid bacilli we find that there are other germs that grow and develop troubles before and after the infection of Eberth's bacilli. We cannot outline a fixed treatment except as to sanitary measures in destroying the bacilli and other germs in feces, urine, bed and body linen. It is not one disease that causes death so often as the previous condition of patient and his ability to handle the toxins through the bowels and lymphatics. While the applied remedies must destroy them whenever they or the germs may be reached and eliminated to the place of safety for patient and every other person.

The local infection through the Peyer's patches and mesenteric glands soon produce enough toxalbumins to raise a fever, check the ability of other glands to perform their usual functions often holding this condition until the vital tissues of the organ is so impaired that a life injury is done to the Liver, kidneys and other glands and the patient is left afflicted with what "I have had ever since I had the typhoid fever."

The manifestation of fever, tenderness and tympanitic bowels, tongue red at the edges, tremulous and disposition to hold it out when asked to show it; night delirium, aching in bones, dull hearing, may all be very prominent and show the seriousness of the disease, but the bad case may get well and

the mild case die if there is a tubercular history from hemorrhage or a severe congestion of the glands and suppuration and perforation.

Hence that treatment that is rational to each patient is our course as to applied remedies. If seen early or late calomel to clear the bowels and disinfect as much as will and flush the colon freely before the stage of ulceration. Sponging the skin freely with water not cold enough to cause shock, changing bed linen and garments of patient each day. Milk or liquid diet for nourishment. Attending carefully to the secretions from every source obtainable.

Salol and the sulphocarbolates in combination and perhaps more often than any other antipyretic acetanilid or the essence of pepsin to which is to be added $\frac{1}{2}$ to 1 minim of gelsemium and aconite with $\frac{1}{4}$ to $\frac{1}{8}$ minim belladonna of the normal tincture to each teaspoonful, 2 hours apart.

Acetozone we have used but little also the Woodbridge formula all have not yet given me the results that the first named have. Hence a poor remedy well used is better than a good remedy poorly used. Since then on facts in treatment of disease we feel it is not always best to go after strange gods too soon. There is no royal road as yet to cure this much dreaded disease. Best to modify its severity and period of time is our best mission as yet. If I had but 3 remedies to use only, I would say calomel, acetanilid and plenty of water. internally and externally until convalescence is well established. But watch out for your patient who has a tubercular family history, or a scrofulous symptom in self or any of the family. The fever will run high and hemorrhage or perforation of bowels may defeat your best efforts with any and all remedies.

The feces and urine should always be kept isolated and away from the earth and disinfected surely and safely. Establish a strict care with the nurse thus saving a whole community from attack later on.

In conclusion we would say look well to the family history, habits and temperament of the patient and to the isolation and disinfection of everything from and about the patient. Seek to find the source of infection

and then prevent it from infecting others. And until this is done we will still see certain vicinities yearly having their round of typhoid fever. Many lives lost while we are exploiting some new fad or medicine in curing typhoid fever.

Statistical tables have given us but little. As to complications they have been the source of death, and mine have been as Dr. David Yandel said from "hemorrhage or toxemia due to previous history of tuberculosis and so-called scrofula complicating typhoid fever."

TYPHOID FEVER.

BY C. L. KERRICK, M. D., CHRISMAN.

Typhoid fever is common to all general practitioners of medicine. As far back as medical history records, we have descriptions of epidemics occurring in the late summer and early autumn months, very closely resembling the symptoms of typhoid fever as it exists today; but only in the last half of the century has its etiology been well known. Bretonneau as early as 1813-26 established the relationship of the lesions of Peyer's patches and solitary glands and the clinical symptoms of the disease, but it was as late as 1870-71, before it was suspected that a micro-organism was the cause of the disease; and not until 1880, that the investigations of Eberth proved beyond doubt that the bacillus typhosus was the cause of the disease.

So far as is now known this bacillus affects only human beings. It grows and multiplies in an infected individual and is excreted by bowels and kidneys, to infect the water supplies and if permitted to dry in open air may be borne by the air to various food products. So far as is at present known the bacillus does not develop or multiply outside the human body.

It is destroyed in from 4 to 8 hours by direct rays of the sun. It will live in distilled water 5 days and in water affording a favorable condition and a suitable medium it will live 3 months. In proper cultures and under conditions adapted to its keeping it will live indefinitely. Sternberg has found it after a period of one year. After 3 months

incarceration in ice it has still been found active and virulent. In the soil it is said to live 3 to 6 months, the nearer the surface and the greater the exposure to the sun, the shorter is its existence. It will stand a temperature of 156 degrees.

Its entrance into the body is chiefly through the alimentary tract, probably always so. Its principal mode of entrance is through the drinking of infected water, but foods infected by contaminated water or germ laden air may be the means of its introduction, among such foods may be mentioned fresh oysters that are eaten raw, vegetables that have been washed with infected water or that have been grown in contaminated soil; milk that has been placed in cans washed with polluted water and the possibility that the milk might be just a little watered with it. While in Louisville, Ky., in 1892, an epidemic occurred in a portion of the city which upon investigation by the Board of Health was found to be due to the milkman rinsing his cans in water from a contaminated cistern.

It is possible one may contract the disease by inhaling germ laden air, the germ being swallowed.

In his report of the Commission appointed to investigate the cause of the prevalence of typhoid fever in camps of our armies in the Cuban war. Vaughan has shown that the common house fly is a common carrier of the disease, by first feasting on undisinfected fecal matter of patients suffering with the disease and afterward carrying the germ to food supplies.

It is said that possibly one or two germs introduced into the system is sufficient to produce the disease. Once in the alimentary tract they multiply very rapidly and before the end of the period of incubation may have been carried by the circulation to nearly all parts of the body, a period of 2 or 3 weeks in which patient is thoroughly invaded by bacilli and yet not realize that he is ill.

There is no disease that presents a wider variance in its symptoms than typhoid. A disease so common to us, prevailing in all parts of the world and at almost all times of the year, and yet a disease that will sometimes run a weeks course before the best of

us can be certain of a diagnosis. I have seen cases with regular rise of temperature, so often described, together with other typical symptoms of the first stage; and again I have seen cases start in with a temperature of 105 to subside at the end of the week to one of a 101-102. Two other cases I call to mind which at the 2d week's stage had a subnormal temperature, which persisted for several days. The bowel symptoms are of little importance, especially in the milder cases. Under an anti-fermentative or so-called antiseptic treatment, we oftentimes have no tympanitis or meteorism and sometimes no perceptible tenderness. The tongue of typhoids, I have found to present as many different appearances as in any other of the infectious diseases. There is one symptom I have found in every case, excepting one, that I have treated and that one is the eruption over the abdomen first appearing about the 7th or 8th day.

My diagnosis of typhoid fever is based upon two things: first, when I have a patient with a continued elevation of temperature, without a discoverable cause and which does not yield to appropriate treatment. Second, when at the beginning of the 2d week I have the eruption. In making a diagnosis upon these two symptoms I have never yet had reason to change it later on in the disease. Of course by having other typical symptoms of typhoid or where the Widal test is employed we can oftentimes make an earlier diagnosis.

The Treatment: I employ, I shall only give in a general way without any reference to special symptoms. As soon as a disease is suspected to be typhoid, I reverse a point of law and consider it guilty until innocence is proven. The patient should be put to bed at once; absolute rest both physical and mental is imperatively demanded. All the strength that is preserved in the beginning will be brought up as reserve forces in the later stages. This point is not only of prime importance to the patient himself, but it is also important to an entire community in as much as the germs of the disease are not disseminated broadcast by the patient while perambulating at large. A quiet, well ventilated room should be selected with as little

furniture as is consistent with comfort. A white iron bedstead with a mattress covered with a rubber sheet over which is placed the ordinary sheet. Patient should be covered with sheet or blanket as occasion demands. Thompson recommends that he wear no night shirt or other clothing. Clothing is sometimes a source of bedsores by getting wrinkled and so irritating the skin. If possible he should be under the care of a trained nurse. Plenty of good cool water should be given him. Sometimes the acid drinks are more agreeable. The bowels should be well cleared out with small doses of calomel repeated at frequent intervals until effect. An enema is sometimes also employed. After bowels are thoroughly moved I employ 3 to 5 grains of salol every 3 hours at first and less frequent as the effect is secured on bowel contents. Sometimes the sulphocarb of zinc is employed instead of salol. A liquid diet from first, varied to suit each individual case.

The temperature I have always been able to control by cold sponging. Under 102 it needs no attention, probably a certain amount is an advantage and conservative. We have long since learned to regard it only as a symptom. I have never yet employed the cold bath in a typhoid case. On two or three occasions I have employed the cold pack. It is not always an easy matter to arrange for bathing in the country and necessitates a well trained nurse in all cases, which often one does not have. The mouth should receive frequent washings with some of the pleasant antiseptic solutions. The nose should receive attention by spraying and anointing with some bland and soothing ointment or oil, which may be also applied to lips if fissured and dry.

I believe in an antiseptic treatment in so far that it probably keeps down a mixed infection, the bowels no doubt containing germs of many varieties generating their ptomaines. It may possibly destroy some of the bacillus typhosis that are continually multiplying in the bowels thereby preventing them being added to an already overloaded system. When we remember that this disease has an incubative period of 2 or 3 weeks during which time the bacilli are multiply-

ing and re-multiplying, penetrating the walls of the intestines to be carried by the circulation to remote organs of the body; the blood being saturated with their toxins, we can readily see what little effect any intestinal antiseptic would have on the already developed disease.

Along this line Dr. Quine says: "It is hardly to be imagined and still less is it to be claimed, that twelve hundred square inches of gastro-intestinal mucous membrane, with all its pockets and crypts and folds and creases and other hiding places for germs is possible; and yet, it is obvious that before these organisms can penetrate the walls of the intestines they must be free in the lumen and mixed with fecal matter; and as long as they are free they are open to attack by purgatives and antiseptics."

To prevent further absorption of bacillus, to destroy germs of other infections thus preventing their toxins entering blood should be our aim rather than influencing an already fully developed disease.

One of our most important duties in managing a case of typhoid is to so thoroughly carry out a system of disinfection that the possibility of dissemination of the disease shall be obviated. To do this all excreta from a suspected case of typhoid should be thoroughly disinfected from the beginning of his indisposition, and if the case proves to be typhoid, disinfection should be continued for from 10 to 20 days after temperature has reached normal. To disinfect excreta. Thompson recommends Crude Carb. Ac. 1-10, Bichlor Mer. 1-500 acidulated, or chloride of lime. The bedpan should contain the solution into which the excreta is received and allowed to stand for 2 hours or more it should then be emptied in a trench as far from any water supply as possible and covered with the chloride of lime.

Thermometer, rectal syringes in fact everything that comes in contact with the excreta of patient should be submerged into a disinfecting fluid. When I use thermometer in mouth of patient I immediately after using place it in carbolic acid, having in the room for that purpose a 2 oz. vial into which thermometer is placed. All soiled clothing

should be treated to disinfecting solution and then boiled before being washed.

The water in which a patient is bathed should be thoroughly disinfected or else carried to pit and thrown in with sufficient quantity of lime to destroy *Bacillus*. This is oftentimes a weak point in an otherwise careful disinfection. The water being thrown out on ground where it is liable to drain into water supply. It is just as important that all water that has been used in bathing patient and rinsing vessels should be disinfected as it is to disinfect the stools.

The hands of the physician should be well washed with hot water and soap after each examination of patient and if in any manner soiled, in a disinfecting solution. The nurse should use the same precautions. Utensils used in feeding patient should be subjected to boiling heat.

All suspected water should be boiled before using whether there is typhoid fever existing in vicinity or not. For villages and small cities without a perfect water system driven wells are the best. In most cases this will apply to the country.

A preventative inoculation, consisting of sterilized cultures of the typhoid bacilli has been used in England and other places lately with what is claimed to be considerable success. As yet I don't know of its having been employed in this country.

Discussion.

Dr. Weir: These papers interest me especially and I wish to give a little of my experience, first in regard to symptoms. The fever is unreliable and the step ladder fever that we read about we sometimes see. The fever will be reduced by calomel and then run its course. One symptom I believe has not been spoken of, that is the enlarged spleen noticeable toward the end of the last week. The spots of which Dr. Kerrick speaks have been misleading to me. I may not be able to localize spots and I find spots on people who have not typhoid fever. In regard to treatment, the laxative at the beginning is certainly in order and after that, in doubtful cases, I give quinine to make the test. I want my patients to drink three quarts of water daily. I never had the courage to use cold baths, but use tepid sponge bath. That is I have my patient sponged all over with tepid water, letting him lie still and the patient feels better. I sometimes have trouble with the first bath.

In regard to excretions we all have our methods of destroying the septic matter and we have been doing this with carbolic acid. After each passage of the bowels, into a solution of carbolic acid, empty in a large hole dug in the ground a

long distance from the well. When the person gets well or dies, as he sometimes does, the hole is filled up perhaps with one foot of earth. When persons are weak, I nearly always give strychnia in the beginning, for two weeks, and I believe strychnia is better in more cases than acetozone.

Dr. Tenbrook: There is one thing I would like to mention in regard to nourishment. I find that when I can get a patient to take plenty of butter milk that they get along well. Another thing I have my patient sponged every day and the sheets, the night shirts, and pillow cases put in water and boiled. Have the water boiling and then put the clothes in the boiling water. I used the bi-chloride of Mercury but I found when used for two or three weeks that the bed clothes were streaked on account of the disinfectant and the bi-chloride of course destroyed them. In regard to the medicine, there is not much needed in typhoid fever. In some cases where the bowels are very loose and there are many discharges, I find that by giving a cathartic at bed time, I get a good movement of the bowels in the day time, decreasing the number of discharges.

Dr. Hayhurst: In the south part of Crawford and the north part of Lawrence counties, we have had an epidemic of typhoid fever. We gave the mild chloride and quinine and in the course of twenty-four or forty-eight hours and find the diarrhoea checked, fetid discharge and the fever lessened. We have used that now in about ten or twelve cases. One symptom we lay most stress upon is the yellowish condition of the palm of the hand and that is one of the first things we look for. We gave acetozone in a solution to part of our patients but some could not stand it. It caused vomiting. We used two and a half grain capsules with large draughts of water. Two cases in particular, one was a man about twenty years old, we used the Widal test on. In two weeks I found that temperature was normal.

Dr. Rafferty: In regard to what Dr. Hayhurst said about acetozone, I used it in two cases this fall. I believe it is an antiseptic. It helped the diarrhoea, lowered the temperature by it. We had some cases in which we did not give acetozone, and we noticed no difference in the course of the disease. There is one point I wish to bring out. The two most useful things are rest in bed and the diet. I had a lady seventy-two years old with a typical case of typhoid fever. After three weeks her temperature got down to one hundred and after that her fever got high. I tried the general remedies and it was easily seen that she was losing every twenty-four hours. I hesitated for a few days and finally made up my mind that she had typhoid fever. After two or three days I had her get up out of bed and in three days she was out of bed all the time and her diet consisted of eggs, rice, and finally she improved and is now in good condition and I believe the woman would have gone on and died had she stayed in bed and kept up the dieting.

Dr. Mandeville: Those were good papers and I think this Society needs a paper on Typhoid Fever once each year. We get good ideas and

good discussions and both papers I enjoyed very much.

From 1868 to 1880 or 1885, I tried to cure Typhoid fever. After I had a good many cases I found I must let nature take her course. I think Typhoid fever is an eruptive fever as much as measles. We cure the complications and then the measles cure themselves. So it is with Typhoid fever. I have been letting my patients alone with Typhoid fever. I think it is useless expense to give medicine. If I had it to do over again, I think some of my patients, if I had not over-drugged them, might be living today but I was zealous and I wanted to cure them right up and if I had not hurried, I would have had better results. I have no use for coal-tar preparations. I never lost a case where I gave the bath treatment but it is not practical in private houses, only in hospitals. Two or three nurses are required to give a successful bath. I think you get along just as well with tepid water or a sponge bath as with hot water. Try two quarts of water every day without the acetozone and see if you do not get as good results. Pure water will not hurt your Typhoid fever patients. Give them three quarts of water every twenty-four hours and you will not find the parched conditions of the alimentary canal and bowels. My treatment for the last five or six years, has been a good deal of water and little medicine and never to waken the patient to give him either. I have few complications in regard to hemorrhage of the bowels. I never lost a case with that except once, and that was years ago. If you just sit back and keep quiet, give your patient time and let him alone, and it has been years since I lost a case of Typhoid fever, you will not be near so liable to have complications.

There is another point that has been made and I have never made that mistake in my life where a case of appendicitis has been treated for Typhoid fever and when it was too late, they made the discovery that it was appendicitis. One thing I want to emphasize, that is the let alone treatment. I will stake my chances on that.

Dr. Faught: There is just one point that comes to mind in Typhoid fever cases, in regard to their food. I am a firm believer that many Typhoid fever patients are over fed. From the beginning they are over fed. The friends and neighbors of patients in the country crowd things upon them that they do not want and they will push them to eat when they do not want it and this is a thing we have to watch. I am a firm believer that with continued fever you can starve it out. I believe when fever is running high in all cases of fever they are better with nothing but water. I have demonstrated that in two cases on my own body. If you will look at me you will see that I am a fair specimen of a man. I had a case of fever in the fall of '96, I believe. I lost flesh rapidly. There was a period of eighteen days after the fever had well commenced on me that I took nothing into my stomach except a little liquid matter and cold water. On the nineteenth day I took some butter milk which I think is an excellent drink for typhoid fever. I did want butter milk and it gave me strength. On the twentieth day I took more butter milk. On the twenty-first day

I had some tender boiled squirrel. I ate half of a squirrel as large as a full grown rat in twenty-four hours. On the twenty-second day I was able to walk fifty yards to a barber shop to get shaved.

Three years ago this fall I had a fever said to be typhoid fever but I was sick for twenty-four days and I ate no solid food during the time and my principal diet was water. Sometimes I did take broth with plenty of water and some salt in the water, then butter milk.

I have cases to treat of typhoid fever when they do not want a particle of food of any kind whatever. I instruct them not to give them what they do not want. I also insist on them taking water and if it does not taste well I have it flavored with something, a little lemon, a little tartish jelly in cold water and sugar in it and I urge them to take it frequently. I am firmly in belief of treating typhoid fever on the hygienic plan. In regard to medicine, I do not use very much medicine. A few things that have not been mentioned I wish to praise. They are old but standard. One is turpentine. I think in my practice I find use for a little turpentine. When I find a patient with an especially dry tongue, not so much red, but coated, you can give from three to six drops of turpentine on a little sugar and do that for twenty-four hours and you will find it will help. Calomel is a good antiseptic, also febrifuge. Small doses of gelseminum stirred up in water will be of benefit sometimes. Aconite is better when the pulse conditions call for it. Sometimes with a coated, brown tongue and with considerable gas on the bowels, I find that doses of subnitrate of bismuth and rhubarb should not be forgotten.

Dr. Kerrick: Dr. TenBroeck misunderstood me in my use of bichloride for I use it for the stools only.

Now in presenting this paper you all know that Typhoid fever is a large subject. Text books of hundreds of pages have been written on this subject alone and my aim in presenting this paper was simply to treat it in a general way as it appeared to me in my experience of nineteen or twenty cases. My cases have had a course of from sixteen days to nine weeks. Generally they run the course in sixteen days to four weeks. Those cases running more than four weeks might be termed complications rather than a continuation of the disease itself. I have so far had no deaths in treatment of the disease.

Dr. Jones: In the matter of diet I have found nothing better than butter milk and as to acetone I have found that the main factor in that was the water. The plan of using it in capsules I have discovered nauseates and burns and I discarded them. The Widal test I think in very many cases is not satisfactory because you make your diagnosis of Typhoid fever and have proved it before you use it, but it is a good thing to use. About the hole in the ground. Keep the stools above ground until you are sure it is safe to be near the ground because you may fail to disinfect if you put it below ground. Where they have dug a hole in the ground the doctor is busy looking after typhoid fever patients and the undertaker is busy after him.

REMARKS ON THE DIAGNOSIS OF TUBERCULOSIS.

BY ROY F. ROGERS, M. D., SHELBYVILLE.

There are certain well established principles in medicine which are the outcome of years of collective experience. By principles is meant the facts which have been so thoroughly proven that they come within the category of the things designated fundamental laws. There is not at the present time any doubt as to the cause of the disease we speak of as tuberculosis, for we well know that the tubercle bacillus is present in each and every case. The question that should occupy our attention is "How can we, the physicians of the present day, prevent, modify, or if possible eradicate this disease?" As the title of this paper states, I will not endeavor to instruct any of you in any point regarding the diagnosis of tuberculosis but rather upon answering the foregoing question.

Tuberculosis in all its forms is caused by a specific microbe, the tubercle bacillus, the action of which produces upon the tissues, histological and vascular changes which are characteristic of chronic inflammation.

How, when and where, certain persons contract the disease, we have in the literature, everything under the face of the sun listed as a causative factor. F. Martius¹, and Reiffel², are strong advocates of the inheritance theory and strengthen their claims by a number of good cases; Godfrey W. Hambleton³, believes that the toxin of tuberculosis is a natural product which fails of complete elimination in consequence of insufficient breathing, and accumulating in the body, produces the disease; H. Grassett⁴, thinks it is the manner in which the masses live; Edmond Vidal⁵, claims that in the mothers milk, a prophylactic is to be found for tuberculosis and holds that while milk from another woman may nourish, it remains for the mothers milk to furnish the prophylactic stimulus, and advises that we should encourage mothers to nourish their own children; Agnes C. Viator⁶, places the blame upon the congested cities, with their poor air, bad ventilation, poor cooking, dirt and noise;

Lancereaux⁷, attributed one-half the cases of tuberculosis to mal-nutrition and alcoholism; while out of his two thousand cases he gives the following as the causative factors, namely: Insufficient aeration, Sedentary habits, poverty and privations, poverty and pregnancy, probable heredity, and contagion.

Prof. Koch⁸, has provoked a lively discussion on the relation of human and bovine tuberculosis. Whether bovine tuberculosis can be transmitted to man cannot be determined by direct experiment, but Koch thinks that we have evidence enough from the impunity with which the inhabitants of large cities use dairy products containing living bacilli of bovine tuberculosis that man is not susceptible to infection by this germ. A very valuable statement contained in Koch's paper is *that it is undoubtedly true that human sputum is the main source of human tuberculosis*. A. D. Blackader⁹, in his paper states that it is probable that human bovine and avian tubercle bacilli are varieties of the same species and acquire their peculiar characters by repeated passage through the bodies of the animal species to which each is peculiar. W. H. Ten Broeck¹⁰, calls our attention to the habits of the tubercular and other patients at our popular health resorts and notes that the drinking glasses are washed in the 'soda springs' at both Manitou and Waukesha and that the bottling of the waters are from these identical springs.

Surgeons and diagnosticians of equal learning and honesty may not diagnose a condition in the same way. They may not be equally strong in perception, or equally accurate in observation or in measurements and thus form different judgments of the existing conditions, which of necessity, must constitute the basis of their scientific opinions.

In the tubercular patient, the deviation of functions are so slight from the normal and come on so insiduously that the transition from the normal to the abnormal is overlooked by the patient and his friends. The symptoms set up are readily recognized by the careful and painstaking physician, and why he does not inform the patient or the near relatives of the exact nature of the disease we are not in a position to state. Sooner

or later when time proves to them what the affection is, they will believe one of two things; either that the physician was not learned enough to recognize the condition or else that he was guilty of a deliberate falsehood. In private practice, the result of such work on the part of the physician, would be far reaching to say the least.

Again, there are a great many men, who after exhausting every means at their command, in their endeavors to benefit the patient, and not wishing to change the diagnosis, will have their patient take a trip to a health resort, and if you will glance over the writings of any of the profession who reside in these places¹¹, you will note that they all will tell you that there are comparatively few patients who have any conception of their real condition. This truly is a sad state of affairs when we know that the tubercular patient is only harmful through his habits, and, gentlemen, there never was a tubercular patient, who would not, after learning the depressing truth, but would listen to the advice of the medical attendant when he learns that through his habits he may be the cause of others contracting the disease.

A patient cannot carry out instructions intelligently and do that which is necessary to effect his cure unless he understands the reason for it; and he is a menace to the health of those about him unless he takes proper precautions to prevent the spread of his disease.

There is many a patient who has been sent to health resorts and different climates, suffering with what their family physician informed them was bronchitis or throat trouble, or dyspepsia or weak lungs, who has suffered inconvenience in securing suitable accommodations, owing to the fact, that the public is more or less afraid of him, and that they are not friendly to the indiscriminate expectorator.

A tubercular subject becomes dangerous when he begins to expectorate tubercular matter and from this time, his disease begins to be contagious.

Legislation, in the handling of these cases is practically useless, for the tubercular patient is a nervous, irritable, selfish, suspicious, at times indifferent, and easily crossed

personage. Compulsory methods if tried, will fail in every case. Kindness and gentleness, together with a little tact and diplomacy, not forgetting to use a small amount of persuasion at opportune moments will work wonders in these cases. The rendering a patient plastic in the hands of the attending physician is an advantage to the successful treatment, and the patient having complete knowledge of his condition will endeavor to assist himself and others who may be working in his behalf.

In conclusion, I will say that, knowing that when we remove the cause of a disease, we are then in a position to treat it more intelligently and knowing also that every new case of tuberculosis must be propagated from an old one, it is possible, theoretically at least, to stop the propagation by shutting off the supply. This, practically, is difficult of execution—one case, however can be prevented at a time.

There are too many consumptives who are ignorant of the contagious nature of the disease from which they suffer.

These patients must be educated to a better knowledge of their disease. Knowledge will take away fear and bring hope.

Tuberculosis, from the dawn of history to the present day, has been one of the worst scourges of mankind. Not only has it afflicted man himself but every kind of brute creation with which man is closely associated. It strikes at man's life in a way that brings mental anguish as well as physical suffering, and it deals him out sorrow and want when it cannot reach him with death. It has been a shackle to his progress in civilization, a mildew upon his physical evolution, and a leaven of decay to his morality.

Science has laid before the world the cause of tuberculosis and has given such an insight into the lives of the micro-organisms which produce it that it is possible for us to combat it successfully, and there is no better way to begin than by instructing patients how to care for themselves and by so doing, protect those who must care for them.

1. F. Martius; Berliner klin. Wochenschrift. Aug. 15, '01.

2. Reiffel; Die Erblichkeit der Schwind-sucht und der tuberculösen. Prozesse, '90.

3. Hambleton; Lancet, Dec. 28, '01.

4. Hector Grasset; Le Progres Medical, March, '01.

5. E. Vidal; Le Progres Medical, March, '01.

6. A. C. Viator; Boston Medical and Surgical Journal, Feb., 1902.

7. Lancereaux; Gazette des Hopitaux, April, '01.

8. Koch; Deutsche med. Wochenschrift, Aug. 15, '01.

9. Boston Medical and Surgical Journal, December 19, '01.

10. Tenbroeck; Journal American Medical Association, Vol. XLI, No. 11.

11. Ambler; Journal American Medical Association, Vol. XLI, No. 11.

Flick; "Consumption," Philadelphia, '03.

Discussion.

Dr. Baughman: The paper was well written and I feel like complimenting Dr. Rogers. There is one place where I beg to differ with him, basing my judgment on my own experience, that is in getting patients to understand what they have. I have taken the trouble to go into the disease with them and show them how they could infect others with the sole purpose of getting them to be careful. I have urged on them not to use the family towel or drinking cup. I have a night school teacher who I lately took through a course of treatment and begged of him to not infect any others. He promised me he would not. He was careful to spit on the grass instead of the walk as he left my office. He went down to the public well, got himself a drink with the public cup. I feel that we should have strict legal injunctions on these patients.

Dr. Weir: In regard to the right thing to do, we ought to watch our patients very carefully but not report them to the public authorities. I know of several cases where wives had the disease and in a few years the husbands would have it too. A doctor tells me he knows of thirteen cases of couples who have died with the disease, where one contracted the disease from the other.

Dr. Buchanan: I think we all take the germs into our system. We have got to be in a certain condition for the disease to be contagious. In those who are in that condition the germs develop. I have had cases in my experience that I thought were contagious ones, owing to the special condition of the patients. It is contagious there is no doubt about that.

W. S. Jones: I think the thing that confronts us as physicians and fathers is the question of contagion of tuberculosis. I believe when the day comes for private schools that a great stride will be taken in the eradication of this disease. I am familiar with cases of tuberculosis where the children having it are allowed to go to the public schools. We have no law that keeps them out. These children are carrying tuberculosis germs into the school room. We have patients with tuberculosis who live long and useful lives and finally die of some other disease who have infected others who die long before of tuberculosis. It confronts me with this thought, that when our children are in the school room that one tuberculous patient may infect others and especially the bright boy or girl who devote themselves to their studies whereby their bodies

have become weakened and in no condition to withstand the disease they become infected with tuberculosis and die. One patient may infect another member of his family. These are the points in my mind that the writer has brought out and I wish to thank Dr. Rogers for his paper and say that we should look always to our school rooms where many are infected.

Dr. Rogers: The one thing that seems to attract the majority is in regard to contagion. Why is it if tuberculosis is contagious that the children live to be about seventeen years or thereabouts and then die? The children of tuberculous patients are puny. In making a study of tuberculosis some years ago with an intern of the hospital in working through the tuberculosis wards we thought of examining our own throats and noses for the germs. We found tuberculous bacilli in seventy per cent of the examinations made, (out of that twenty-five men just two died of tuberculosis). A great many writers have written about the contagion from the Pullman sleepers and as a result we know that the Pullman company are fumigating their cars thoroughly.

APPENDICITIS FROM THE STAND- POINT OF THE GENERAL PRAC- TITIONER.

BY W. J. FERNOLD, M. D., FRANKFORT, IND.

In preparing a paper on the above subject I wish to say that I do so with a becoming sense of modesty, being fully aware of the fact that the position taken is not the popular one. No doubt the title will sound odd to you. For if we are to judge of the opinion held by the profession at large, by what we hear in medical societies and read in medical journals, we are inevitably driven to the conclusion that in the determination of the proper course to be pursued in caring for a case of appendicitis the general practitioner has no standpoint. His only function is to make a diagnosis and turn the case over to the nearest abdominal surgeon for an operation. Whenever the subject is discussed the surgeon has the floor; and by the persistent assertion of the surgeon that the only scientific and rational treatment of appendicitis is to operate immediately on making a diagnosis, as well as by the silence with which that statement is received by all who listen or read, the casual observer would be lead to the belief that the question was settled by agreement of every one to the proposition; and that everywhere diagnosis of appendicitis and

operation were as near synchronous as it is possible to make them.

And yet in the face of the unconditional assertion of the surgeon, and the unbroken silence of the general practitioner, we all know that such a conclusion is absolutely false. We know that the general practitioner goes back from these meetings to his office and, instead of operating or calling in an operator immediately on making a diagnosis, he treats his cases according to his judgment of the necessities of the individual case; advising an immediate operation in some, treating others along well defined medical lines, and advising operation in others when the progress of the disease seems to render that advisable, then in still others—recurrent cases—he advises an operation after recovery from the acute symptoms.

Now this silent consent of the general practitioner to the surgical dictum of immediate operation, and his denial of it in his actual practice involves an absolute contradiction in a condition of vital importance, and places him in a position in which he is apparently false to himself or to his patient. And because of this apparently false position it becomes the duty of the general practitioner to square himself. It is his duty, if he does believe in immediate operation, to see to it that it is done either by himself or by another; and if he does not believe in it, to say so and give his reasons for not believing in it on which he bases his treatment in practice.

I do not believe that the general practitioner is false either to himself or to his patient. The apparent falsity it seems to me is based not on the fact that he has no definite convictions in regard to the matter, but on the fact that, though he has definite convictions, he has not the data at hand upon which he has based his convictions. These data have come to him in the history of the isolated cases which he has treated, but of whose course he has kept no record, and because he has no statistics he cannot substantiate his claims. The surgeon being in a hospital, as a rule, finds it easy to keep his case histories, and moreover, he finds them favorable to his contention by reason of the fact that his operations are all made under

ideal circumstances. The majority of his cases come to him at his hospital and the records are faithfully kept for him without trouble. He is able to express a belief and back it up with the figures.

But with the general practitioner it is different. The keeping of case records is extremely difficult if not impossible. Holding himself ready to do anything necessary under all kinds of circumstances the case book of an ordinarily busy practitioner would become so voluminous if every case was entered that it would become unmanageable and if one were kept only for appendicitis cases he would rarely have it with him. This is the principal reason the general practitioner has to remain silent in these discussions. He has no figures to quote; and figures are so important that any discussion that leaves them out has little weight.

I do not wish to be understood as holding the position that medical treatment is the only treatment in appendicitis, or that it should be instituted first in every case. Nor do I believe the general practitioner holds such a belief. I do not wish to deny that the only proper treatment in many cases is a prompt surgical operation as soon as a diagnosis is made. But I believe it is also a false idea, and this is as false as the other, to operate as a routine measure in every case. I believe that here, as in every other disease, the judgment of the practitioner has its function; and that while the circumstances render an accurate decision very often extremely difficult, yet that difficulty does not justify anyone who considers the highest interest of his patient in hiding behind a cast iron rule that condemns every man with a pain at McBurney's point to a laparotomy. I am conscientious in the belief that every man who fully recovers from one or more attacks of appendicitis without an operation is incomparably better off than if he had an unnecessary appendectomy as a relief from his first attack. Notwithstanding the fact that under modern surgical technique the abdominal cavity may be opened with impunity, it remains true that the man who has suffered an unnecessary laparotomy has received an irreparable injury. And the first question here as in other diseases to be determined be-

fore making an abdominal section is, "is it necessary?"

That it is neither necessary nor advisable to operate in every case is just as certain as that I am able to make a correct diagnosis of appendicitis.

I heartily regret that I am unable to give you the statistics upon which I base this judgment. I have kept no case records of those suffering from this trouble. I can only give a general statement of the facts upon which I base my belief of what constitutes the proper line of treatment to be pursued, letting it go for what it is worth.

There are those present who know that for thirteen years I have enjoyed at least an average practice. They know also that I have no reputation for running away from cases because death seemed imminent; nor did I have cases taken from me in these thirteen years. In that time I have lost by death three cases of appendicitis. One died from general peritonitis after about a week's illness. The second died from an abscess which ruptured into the abdominal cavity as the patient got into bed from which he had arisen repeatedly contrary to instructions. Dr. Newcomb saw this case with me a few hours before death. The third case recovered from the appendicitis and had been dismissed as convalescent. A day or two later I was called again and found the liver tender. A metastatic hepatic abscess developed rapidly and he died in a few days from general pyaemia. I believe that I have averaged five cases yearly for the thirteen years. I know that I have treated four cases in the past two months all of which have made apparently perfect recoveries without operation. Whether the above average seems too high or too low may be determined by each man himself. I have had the number of cases naturally falling to a man doing an active practice and it seems to me that the per cent of deaths compares favorably with the average statistics of those who operate in every case, and I do not believe that these results are in any wise exceptional. I believe many general practitioners could report equally successful results.

If the per cent of recovery is favorable, the condition of the patient's recovering without operation has been much better than

those operated upon. Two of the above cases were operated after recovery from the last of several recurrent attacks and neither had returned to normal after two years from the operation.

If the above estimated cases point to the fact that an operation is not an absolute necessity from a scientific standpoint in every case there are other reasons why the advice to operate immediately is bad, and would give rise to high mortality. That advice indeed is impossible to be followed absolutely in a country practice. The object aimed to be secured by those who advocate immediate operation is the salvation of the patient from either immediate danger or the danger of chronic inflammation, with probable recurrence of the disease. In all cases in which this object is improbable of attainment the idea of operation should be abandoned, and that is exactly the situation that confronts the general practitioner in many cases. The splendid array of statistics of recovery shown by brilliant operators is made possible only by operating under ideal conditions at the time of operation, and by ideal care after the operation has been performed. In the absence of either condition of success the mortality would rapidly mount upward. A third element absolutely necessary to success is skill in the operator. Now the attainment of all three of these essentials of success is impossible in many cases. The largest factor entering into this impossibility in the average case is the expense of securing a skilled operator and a trained nurse to care for the patient after operation. No matter how you figure it that expense is prohibitive often. In another class of cases as we meet them, added to the impossibility of meeting the expense, is the fact that if the operation were performed in the home it would be done under sanitary conditions rendering success very questionable to say the least. In these last cases if the operation were done at all it would have to be done by the family physician and the patient would be subjected to the threefold danger of an unskilled operator, bad sanitary conditions and absence of adequate nursing. I believe that the most radical surgeon would advise that under these last conditions the operation be abandoned.

So that, however, correct the theory of immediate operation may be from a scientific standpoint, as applied in actual practice, it is in a large number of cases absolutely impractical.

I believe the advice to operate at once is easier given from the platform than it is followed at the bedside—even by the man who gives it. We know that the King of England, commanding the best surgeons in the British Empire was not subjected to either an immediate or a complete operation. Sir Thomas Lipton was not operated at once nor at any time when recently ill in Chicago, though he had Prof. Senn as one of his consulting physicians. Within ten days I referred a gentleman to Indianapolis surgeons for advice as to the necessity of an operation for acute recurrent pain at McBurney's point and he was advised to wait. Other cases have come to my notice.

In preparing this paper I regret that my convictions have forced me to take a position at variance with that held so insistently by the surgical branch of our profession. I do not want to be considered a freak nor do I want to be regarded as an old fogey. I have written it not to be known as occupying a peculiar position but to express my belief in the case. This paper is an accurate expression of my practice and I have given the results as accurately as possible. If I am wrong I want to be set right, and, if there are any who believe with me that judgment instead of a cast-iron rule should determine the advisability of an operation I hope each man who so believes will have the courage of his convictions and express himself fully.

In conclusion let me say that the question of what is the correct thing to do in appendicitis will not be settled till it is settled right. For many years the surgeon has proclaimed it settled. But it is not. He has to say it over again next year and then face the situation that though they listen in silence the mass of the profession do not accept his theory. All the statistics from which an effort to reach a conclusion has been attempted have been compiled by the surgeon. They are onesided because they deal only with operative measures. A decision cannot be reached until the other side has been

heard from in statistics showing results obtained from treatment based upon a judgment of the individual case under consideration, and nothing will conduce to a quicker or more accurate settlement of the question than for general practitioners to begin keeping case records, and regularly report results. And when that judgment is rendered I do not believe it will find expression in any routine treatment, operative or otherwise to be applied to every case, but that, as conditions vary, so must treatment vary; and that in this as in other diseases his patients fare best whose judgment is best.

This society is composed of men from the smaller cities of two states, men whose intelligence equals that of the profession from wherever drawn. You have faced this dangerous disease under the manifold conditions confronting the general practitioner. You know what you do in these cases, you know whether your practice squares with the advice of the surgeon or whether you use your judgment in treating these cases, and I hope the general practitioners of this society will freely discuss this paper. And in that discussion I hope you will speak—not of a theory advocated by any man however eminent—but of the thing you do as you sit by the bedside of those who suffer from this complaint, and the results of your treatment. I have told you of the theory on which my practice is based. I believe that many first-class practitioners hold the same belief. I want to know if I am wrong. Personally I believe that the vast majority of these patients will recover without operation, and that the routine amputation of every inflamed appendix would be a crime against every one to whom complete recovery was possible without operation.

It is with particular pleasure that I quote a few words from Dr. Beverley Robinson's article on Conservatism in Medicine and Surgery in the current number of the New York Medical Record, a sample copy of which was laid on my table the night before coming to this meeting.

"The surgical mind, until very lately, with scarcely a halt being called by anyone in such position as to lay absolute claim to a hearing, has viewed appendicitis as almost

invariably a surgical disease, only marked out for surgical intervention. To Sir Frederic Treves, notably by reason of his conservative conduct in the care of King Edward of England and subsequently, when he announced only a short time since, in a public address, what nature was telling us not to do by putting up barriers to prevent undue interference, belongs the signal honor of showing the many erring ones where true knowledge lies.

"Referring to his recent Cavendish lecture, Dr. A. H. Hare writes as follows: 'Treves ventures the opinion that the pathology of the disease and its general mortality does not sanction the practice of opening the abdomen in every case of appendicitis as soon as the diagnosis has been established. He does think, however, that immediate operation is demanded in all ultra-acute cases, and he does not think, in spite of all expressions to the contrary, that these cases are difficult to recognize. Operation is required in every case in which there is a reasonable suspicion that suppuration has taken place, but in Treves' opinion the question of operation in other cases may be kept in abeyance for the first few days of the attack, and may usually be left open for decision until the fifth day or after.'—Further, Dr. Treves lays stress upon the fact that in the great majority of cases of appendicitis recover spontaneously without either an operation or the formation of an abscess; that the ultra-acute cases are actually rare, and that relatively to the whole mass of examples of all degrees suppuration may be said to be uncommon.' 'These views, as we understand them,' writes Dr. Hare, 'coincide with those expressed by Dr. Maurice Richardson of Boston, in a paper which he read during the past winter in Philadelphia, and as Dr. Richardson's experience has been exceedingly rich, the fact that his views and those of Treves agree is particularly interesting.'

"In a most valuable treatise, lately published, on 'Diseases of the Intestines,' Hemmeter devotes considerable space to the presentation of the pros and cons of operative intervention in appendicitis. He speaks in unmistakable terms in support of the clinician's (i. e. the conservative) view. He ap-

pear's to favor operation only when signs and symptoms indicate suppuration, and disagreeable clinical phenomena are increasing."

Discussion.

Dr. Williams: I should like to take hold of that gentleman's hand and shake it a week. My observation has been that there has been case after case operated on for appendicitis where it was not necessary. I firmly believe that there have been more patients sent to Heaven by operations than in any other way. I have only had one case, fifteen or twenty years ago, that did not get well. He might have started appendicitis but I think it was peritonitis. After I had a good many cases that looked like appendicitis, I treated them with hot applications and they got well as fast as if operated on. I thank the gentleman for having the courage to step up and speak as he did.

Dr. Bell: I know of a town not twenty-five miles from here, where in the last five years, I think I would be safe in saying there have been five operations for appendicitis, and there have been two or three operated on that have died. The ones not operated lived. I am glad the doctor wrote that paper. These have been my views for several years. Simply because a man has a pain in the region of the appendix is no reason why he should be operated on. I think a few papers like this will get physicians to understand that there are cases which should not be operated on. Three cases of appendicitis in my twenty-three years of practice, two cases recovered. In the other case, the patient became better. Two or three days after having been better the man grew worse and died. We were not permitted to have a post mortem but it must have been appendicitis. More cases are operated on than should be.

Dr. Horace: I should like to ask Dr. Williams if his cases have been attended with recurring attacks.

Dr. Williams: Yes and no. I have had cases with other physicians that seemed to be returns. I never yet had a case that had any subsequent attacks.

Dr. Cushing: I am very much interested in Dr. Fernal's paper but do not agree with him. If I have a simple case I do not want to operate but I can't always tell. I told a doctor a few weeks ago when I left home for a few weeks, "I have a small case of appendicitis about two miles in the country. Doctor if it comes to the point where another attack is probable and you think an operation necessary, telephone me but don't wait for me but go ahead." I believe in operation as much as is necessary. Ninety-nine per cent will live if operated on immediately. I do not know of any means whereby we can tell if it is a dangerous condition. I think I have had, as I remember now, nine cases. One ran five days before the operation and the patient died. Another died in May of this year with not only appendicitis but with an abscess. Another case I had, the patient was taken at ten o'clock in the morning and at twelve I said it was appendicitis and must be operated, but was ashamed to take him to the hospital as he

walked there. I saw other physicians and they agreed with me. The operation was a success.

Dr. Moorehead: Now as the gentleman who just talked said, it is many times very hard to know when to operate and when not to. I had a case I operated on in September in which I saw the patient at six in the morning. I said she had appendicitis. She had all the symptoms and I told her she should be operated on. Two doctors were called in consultation. One advised against the operation. I saw her the next morning at six o'clock. Told her she must be operated on at once. We removed the appendix and found gangrene. Here is a case I am certain would have been perforated and I believe in that case if we had been governed by the advice of the other physician, that the patient would have died. When to operate and when not to is hard to decide. I believe that in operating there is really very little risk if you use ordinary precautions. There is very little risk in an operation that is conducted in a clean manner. I do not say operate on every case. If I had appendicitis tonight I would say take it out.

Dr. Hoffmann: One thing in the discussion that surprises me is that in a live practice that some say they have only two or three cases of appendicitis which is so common a disease. In my experience it has been my luck to run across fifteen cases of empyema. It is the same with appendicitis. I have had my share and I have seen many cases of appendicitis get well. Fifteen years ago there was more operating on these cases immediately than there is at this time. You are called to see a case that a physician says is appendicitis and you listen to him and you say operate when you are not sure yourself. But that is something I can't understand how a physician will go through fifteen or twenty years of practice and claim he has only seen two or three cases of a disease which many of us have seen seventy-five or a hundred cases of. I operated about a year ago in April. I operated on one last December and found appendix gangrenous. When you see such cases you think the more you see of appendicitis the less you know about it.

Dr. Newcomb: I live in an appendicitis town. There is one thing that occurred to me that has not been mentioned. In the appendix frequently is formed a little stone. I wonder what we would do in that case. Those cases are just as difficult to diagnose as any other. This matter has been presented to my mind. A physician called me to see a case that might be called a case of appendicitis to begin with. The man came to town on a load of corn and called on the doctor and complained of a pain in his side. The doctor gave him some tablets and told him to report the next day. But the next day he heard no report and finally he reported on Wednesday saying that he had no pain the day before but was in considerable pain then. He came to see me. I told him I was unable to see what was the matter but thought it was typhoid fever. The next day he seemed worse, not more so than I would expect in typhoid fever. On Friday noon I saw this man who was driving a load of corn on Monday and he was worse. Then I decided to hold a consultation

during the afternoon. A telephone message came to me to come at once. We met on Friday afternoon and the patient was dying at that time. We persuaded the relatives to allow us to hold a post mortem examination. We soon removed the appendix. I thought I had found grape seeds. I laid one on a paper and broke it and found it was hard sand. There were three of them and they had worn on the appendix. He was dead in four days from the original attack. I think there can be no doubt that if he had been operated on soon enough he would have lived.

A student of our State University came to me complaining of a pain in the stomach. There was no localized pain, simply pain in the stomach. I gave him medicine and told him to report in the evening. I saw him in the evening and the pain had become localized at McBurney's point. I told him he would have to be operated on. We got already for the operation that night. The next morning as soon as we could get ready we operated on him and found grape seed. Some two years ago I wrote a paper on this same subject. I went to the hospital records in our hospital in Champaign and found this record. We have, as I have said, plenty of cases of appendicitis. The hospital had been in operation then about five years. I found recorded there thirty-three cases of appendicitis that had not been operated with five deaths. Twenty-two that had been operated on with two deaths. The majority have not been operated on.

Dr. Epperson: As the paper was a little exhaustive and I think very beneficial to this Society, I will say that there is in my observation but one thing left out that has been the most marked feature in my experience in appendicitis. It came in our community in the form of an epidemic. I can truthfully say that I never saw a case of appendicitis in my practice until three years ago. We had a case then and it was operated on a cure made and six months following that, I think there were something like fourteen or fifteen cases of appendicitis, most of them operated on, in a radius of six miles, and since that time there has not been a case of appendicitis heard of in our section and that makes me believe it comes somewhat in an epidemic form. We may have had cases but if we had we did not know it.

Dr. Allen: In the last year I have had four cases of appendicitis and I expect I am as much at sea as the rest of you. The history of these cases I will try to give you. I was called at two o'clock one night to see a young lady in June last. I found the young lady had appendicitis and peritonitis. I told the mother this was a very grave case, took the father off and told him she would die if not operated on. I offered to have another physician which we did. We went down there to operate but the doctor said if operated on she would die and if we did not operate she would die. We did not and she did die. About a month after the mother came to me with a pain in her side. She had a peritonitis. I treated her and she got over the attack. I warned her that if she had another attack I would have to operate. In three weeks she had another attack. When she recovered from her fever I took her to the hospital and she is better since that operation than she was for years.

I called to see a girl about sixteen years old. She had no pains in the stomach and I gave her a cathartic and left. They sent for me next day and I found her vomiting. Her bowels had moved in the morning. The next morning she was no better and I had a physician in consultation. We could localize no pain. She was in good condition. I asked Dr. Alexander to operate and he said she had peritonitis. I asked him if it was his case would he operate. He admitted that he would not, but would wait till morning. We got there next morning just in time to see her die. I had a boy with peritonitis twenty years old. He got over the first attack all right. I told his father that he had peritonitis and if he had another attack we would operate. I believe the proper time to operate is after they are over it. The boy had a second attack and got well over it and Dr. Barnes removed his appendix and he recovered.

Dr. Mandeville: We all admit that the operation for appendicitis has got to be routine operation. I have seen cases operated on where nothing was made with the operation. There were no pathological conditions there whatever. We can't always tell where the case comes in to operate on. It is a good deal like the man who stopped at a hotel in a town where there were two hotels. He asked a man which was the best hotel. The answer was if you stop at one you wish you had stopped at the other. If you operate and find there was no appendicitis you wish you had not operated. I think there is such a thing as putting on your appendicitis spectacles. The young men that come from our schools and colleges see nothing but appendicitis. They come back to a country practice. No matter what a man has they want to operate for appendicitis. A woman came to me and thought an operation was necessary. I said it may be an abdominal tumor but would not operate. I told her to go home. She went home and I rather lost run of the case when one morning when driving out in the country I saw a gate open and a place to water a horse in the barn yard. I drove in and while I was watering my horse a woman came out with a big baby in her arms, and said, "Doctor here is my tumor."

Dr. Hoff: I have had a great number of cases of appendicitis. The tenth day of convalescence from confinement a woman had vomiting and a train of symptoms that sent me up a tree. Up to this time the woman had gotten along as nicely as any I ever had who had been confined. After the vomiting, came on a severe pain in the right side, with a temperature of one hundred degrees and pulse about ninety. The next day I made up my mind I had a case of appendicitis. The next day she was improved and I thought out of danger. Then pulse and temperature went up, up to 102 degrees in the evening. I had a consultation the same evening and found a tumor and decided to wait until the next morning. The next morning it was more noticeable and her temperature and pulse has subsided. Took her to the hospital and operation was performed and a large quantity of pus was found. The patient is now a strong, hearty woman. It seemed coming on as it did ten days after confinement was very strange, but coming on at the time it did caused considerable

trouble for a while to be sure what kind of a case it was.

Dr. Fernald: In this discussion the most has been said by those that operate and while I am glad to hear from them, I wanted to hear from some physician who has had cases and I wanted to know if his experience was the same as mine.

Now one gentleman said that he thought it very strange that a man should practice for thirteen years and not see any cases of appendicitis. I said in my paper that I did not know how many I had had. I have had four cases in the last two months and all got well, and no operation was made in any of these cases and I cite you to them, and some gentleman who has spoken has always met one kind and I always have met the other kind. The gentleman who spoke of operations left the impression on my mind that if you would cut and it was not appendicitis it would make no difference and if it were then you had done the right thing. That has not been my experience. This young boy who had a recurrent attack I thought would make it necessary for me to tear up this paper but he got well. I have had three cases to die. I do not aim to miss the diagnosis in these cases but have stated facts as they come to me. One of my cases I warned that I thought he ought to be operated on and told him when in the city to go and see a surgeon, and he did and came back with the advice to wait. The leading surgeons of the country are coming to the conclusion that it is not best to operate everything but to use judgment. I do not take the position that there were to be no operations but this routine operation is a bad thing, that the majority of patients would be better without it. I do not want my abdomen opened because a man wants to use a knife and there is another thing I want to speak about and that is, is it right to operate in every case to save a few who would die anyway? I am very sorry that these gentlemen who do not operate have not said anything about it. I believe the position taken was correct. I know it was for me and I believe the man who practices as I do has reasons for not operating and it does not seem to me that there would have been any objections to saying why you do not operate and I was in hopes that it would have been more discussed along that line.

In concluding this discussion let me say that those surgeons who have discussed the paper have had nothing to say concerning the fact that 90 per cent of these cases recover without operation. They have not denied it. They have ignored it. But if it be true then 90 per cent of these operations are useless. And unless it can be shown that an unnecessary laparotomy leaves a man in as good physical condition as he was before then these men have been the victims of a crime in the name of science.

The only argument offered here in justification of the routine operation has been that no one can tell which cases require the operation and which do not, and that therefore every one must be operated as soon as a diagnosis has been made. If there be no other reason assignable then it must be acknowledged that this routine procedure is based—not on knowl-

edge but upon acknowledged ignorance. It has no foundation in science. It is the flower of Nescience.

TRANSPORTATION OF THE INJURED.

BY I. L. FIREBAUGH, M. D., ROBINSON.

Zeal in the important business of freeing the unfortunate from wreckage, must be tempered by judgment so that speed is not had at the price of gravity of the condition of the injured.

In case of need any employee of the company happily unhurt should have been so trained so as to be capable to take charge of, and direct, any force at hand so that the work of rescue may go on without friction and for the best interests of those concerned. The injured should be gently lifted and carried to a place of safety and comfort and enjoined to refrain from all motion, being restrained if necessary. It requires three men to properly carry a person with a broken limb; the one having charge of the injured member should grasp it firmly, making just enough extension to steady the muscles and keep the sharp fragments from piercing the flesh. When the surgeon is at hand the examination should be made at once, if possible, and should be just sufficient to determine the nature of the injury and enable him to treat it intelligently.

Impactions, better utilized as splints, should not be broken up in an effort to get crepitus; nor should an examination be considered complete that does not show the condition of the blood vessels and nerves. All dislocations, and all fractures of the upper extremity, should be set on the spot, unless an anaesthetic is required, when they should be first conveyed home or to a hospital. In that case the injured member should be bound to the side in case of an arm, or to some splint for support when the patient can either walk or be carried. The lower limb is better set at the place of abode, and should be bound to its fellow and anything that has firmness to give it support during transportation. Litters may be extemporized from anything that has strength enough to support the weight of a person and that can

be carried. Sheets, blankets, overcoats, or two grain sacks with two small poles, a little longer than the body, will answer every purpose. In carrying a man with a broken lower extremity, the shorter of the two carriers should have the head of the patient and they should walk with broken step. The patient may also be conveyed on a mattress in a wagon or on a train, in which ease the limbs, if not supported by splints, should be steadied by gentle traction of the hand.

Finally, almost any fracture that does not require amputation, not excepting compound fractures, can be transported across the continent if necessary without detriment, provided it is properly sterilized, set, enveloped in a thick layer of sterile cotton and fixed by a well-fitting plaster bandage. Any tendency to swelling should be met by elevating the limb and slitting the bandage if necessary. The fracture bed should be solid, even, and narrow, with some elasticity; the foot being elevated to provide extension by the weight of the body in most fractures of the femur.

Powerful antagonizing muscles should be relaxed by position in setting fractures, as well as in the reduction of dislocation. A rebellious fragment of the Tibia will often drop immediately into place on flexing the knee-joint, and I have seen a backward dislocation of the Ulna slide immediately into position on flexing the elbow and making a pressure on the Olecranon Process with the thumbs after two surgeons had labored in vain to reduce it by extension, the patient being anaesthetized.

Lastly, a broken limb is properly set when all wounds have been rendered sterile and dressed and when the normal contour and axis of the broken bone have been as nearly restored as possible and fixed in that position.

The best splint is the one that will meet the indications with the greatest comfort and the least inconvenience to the patient.

OBSTIPATION WITH COMPLICATIONS.

BY J. W. EVINGER, M. D., PARIS.

REPORT OF A CASE.

S. C. male. Age 17 years. Family history good. After two or three days of general

malaise took sick on the night of May 12, 1903. I was called to see the patient about midnight. Found him suffering with pain in the abdomen and vomiting. Administered half grain doses of calomel every hour until three grains were taken, followed by effervescent salts. Calomel was mostly retained but the salts were thrown up, bowels did not act.

Commenced flushing the large bowel with warm salt water the evening and night following the administration of the calomel but still got no action on the bowels except some solid feces that was below the point of obstruction. By the third day there was a rise of temperature of two or three degrees, the abdomen had become very tympanitic. Symptoms were becoming more alarming, so I called Dr. C. S. Langhlin in consultation. We decided to use high injections of raw linseed oil with long rectal tube. The oil was about 48 hours in passing away, but the bowels in the meantime had moved sufficient to indicate an opening through.

By the time we thought we had the intestines emptied our patient developed peritonitis. abdomen had become more tympanitic and very tender and hard. Commenced giving opiates by suppositories and hypodermics to quiet the patient and give rest, but opened the bowels when necessary by enemas of warm salt water.

After having peritonitis three or four days the patient developed pneumonia of the lower lobe of the right lung. At the onset of pneumonia respirations were 64. Temperature 3 or 4 degrees above normal, there was very little expectoration, just enough to indicate the condition the lung was in. Treated pneumonia by counterirritation, Strychnine and ammonia carbonate, continued the opiates as required to relieve pain and support the heart.

There was no expectoration following consolidation, so we expected if our patient got well it would be by absorption and without expectorating. May 24th being the 12th day of illness was called in a hurry to see the patient and found him throwing off a great quantity of pus of very foul odor.

Commenced giving patient liquid peptonoids with creasote, with the addition of oil

of eucalyptus with each dose every four hours, and as a general tonic and reconstructive gave Manola, adding to each dose 1-60 gr. of strychnine alternating with the creasote preparation and eucalyptus, and gave stimulants and nourishment to sustain the patient.

Did not commence keeping temperature record until May 28. Average temperature from May 28th to June 1st, a little more than 100. Pulse 106. Respiration 36. June 1st patient developed pleurisy on the left side, and while suffering with pleurisy the abscess cavity in the right lung seemed to be healing and filling in as fast as could be expected. Patient suffered with pleurisy from June 1st to June 13th. Average temperature 100. Pulse 98. Respiration 28. June 14th received a message to come quick as I could get there. When I arrived found patient bleeding profusely from the lung. Administered hypodermic of morphine and ergotine. Hemorrhage ceased in a short time, after he had lost about one quart of blood.

The first three days following hemorrhage patient had a return of obstruction of the bowel but we managed it the same as the first attack. June 23d found patient expectorating pus from old pus cavity, foul odor same as the first but less in quantity. June 14th to 24th patient had severe paroxysms of pain in the abdomen, pain was so severe I would have to administer hypodermics of morphine from one to three times a day to control it. Symptoms would seem to one watching the patient that the bowels were trying to get rid of something, pain being of an expulsive nature. June 24th bowels became obstructed the same as they had twice before.

(I would say before I continue further that during the whole course of the disease from the third day to the present, Dr. C. S. Laughlin saw the case with me eight or nine times, but when the patient had this, the third attack of obstruction, Drs. Musselman and Laughlin were both called.) The treatment of this attack was by use of rectal tube and high injections the same as each time before. From the time he had hemorrhage at this last attack of obstruction the average temperature was 99. Pulse 90. Respirations

21. June 28th quit using injections and commenced giving castor oil, in from one to four tablespoonfuls four or five times every 24 hours, gave sufficient to get from three to five actions of the bowels every 24 hours. Patient commenced improving rapidly and improvement continued until July the 9th, when he expectorated a small quantity of pus, foul odor as at the other attacks, but improvement continued. Discharged the patient July 14th at 5 p. m. with a temperature of 98 $\frac{1}{4}$. Pulse 82. Respiration 17. The duration of illness from beginning to time of discharge being nine weeks. Patient continues to gain in flesh and strength, except a slight relapse of the bowel trouble about five weeks later. Administered a few small doses of calomel followed by castor oil, which soon brought him to his feet again.

He continued to take oil every second or third morning until about three weeks ago, since which time he has not taken anything to act on the bowels. The patient at the present time is in a fair degree of health, taking plenty of exercise riding horseback, and running through the woods with a gun, and various other sports.

Discussion.

Dr. Faught: It appears to me that that man had plenty the matter with him for one fellow. The question arises what was the beginning and the causes of all these conditions and diseases in one patient? The doctor did not undertake to tell us. I do not doubt but what the doctor was correct but when we hear a report something like one we have had in our own experience we wonder sometimes if it was not the same thing that was the matter with our patient. A doctor bases a great deal of his practical work on his own experience. I had a patient that I thought had as much the matter with him as the doctor has reported. I found the dullness in what seemed to be in the lower border of the right lung. On percussion I discovered that abruptly from the clear resonant sound of the tissues I came on this dullness and it continued down as far as the liver. He had obstruction of the bowels I worked finally to get this to move. At times he had some fever and in the beginning some chills. I thought it was from an abscess. Later on I was called to see that patient, and there was expectorated a very foul discharge. He coughed but with very little effort and this discharge smelled like rotten egg. The patient was exhausted and the expectoration continued for twenty-four hours. I studied the case carefully and made up my mind from the pain in the abdomen that he had an abscess in the liver, and had come in contact with the pleura and diaphragm and to the tubes and was expelled from the tubes and that the case was

probably the same as this of the doctor and was a very obstinate case and I did as little as possible for I did not know what to do and after this discharge, I supported my patient as well as I could and he is doing well now and I know it was an abscess of the liver. I do not undertake to say that was what the doctor had but say it might have been the case and it could produce all the trouble he has mentioned, not excluding the pleurisy.

HISTORIC RELATIONS OF FAITH HEALING.

BY C. BARLOW, M. D., ROBINSON.

The "Vis Medicatrix Naturae," or the reparative and recuperative powers of nature, together with the traditional tree of life and knowledge and the wily serpent who it seems understood something of the gullibility of mankind and succeeded in giving our first parents a dose of the forbidden fruit, in all probability gave the suggestion for resorting to the mysterious and supernatural forces for the cure and prevention of disease. This same serpent, who, it seems, had much to do with the advent of sickness and death into the world, succeeded in becoming a symbol of life and was therefore regarded as being able to prevent sickness and to cure disease. I do not know that this was the origin of "*similia similibus curantur*" but it is very similar.

It seems that from the earliest period of the world's history, faith healing was believed in and resorted to in various ways and by all nations. It is very probable the early settlers upon our globe called upon their creator in times of sickness, and later resorted to the empirical use of remedies of the crudest sort.

In the Homeric age it seems that medicine had risen to the dignity of a profession and existed entirely independent of religion. It is quite evident, however, that a resort was had to the various divinities for the cure and prevention of disease and that within a short period medicine and religion coalesced in a certain degree, both physis and supernatural imprecations being resorted to. This state of affairs continued until the days of Hippocrates, after which the priest physicians began to lose their popularity and the Aesculapian Temples ceased to exist by the order of

Constantine about three hundred years after Christ.

Faith healing did not cease with the destruction of the Temples, but continued to exist and was practiced in a certain degree by the clergy, and even kings were believed to possess power to heal disease by merely touching the patient and ordering the disease to disappear.

Faith healing has continued in its various forms throughout the ages and probably exists in a more ridiculous form today than at any other time in the world's history. In former times men were sincere in their beliefs because of their ignorance of the cause of disease and the absence of scientific medicine, but now, as practiced in the light of science, it is absolute quackery. This is the rule except amongst the ignorant and profoundly superstitious.

Aesculapius was known and worshiped as the god of medicine by the ancient Greeks. Before his time his father, Apollo, was regarded as the chief god of medicine. It is said that he possessed the eminent qualities of a sun god and replaced Helios as such. In this belief the power of the sun to produce heat and light gave it recognition as the great dispenser of life and health.

The Asclepidae and the Aesculapian Temples were the direct results of the medical knowledge which had been gathered together up to the time of Apollo and by the power over disease and pestilence possessed by all the gods and goddesses including himself, his son Aesculapius, and his daughters Hygeia and Panacea. I know it has been stated that "there is no sign in the Homeric poems that medicine was subordinate to religion" but this, I am inclined to believe, is incorrect.

In the Aesculapian Temples, the priests, who were direct descendants of Aesculapius, also acted as physicians. In these Temples Aesculapius was worshiped as a god and it was by the faith in him as such that most of the cures were effected, and medicine surely was subordinate to faith healing in these institutions.

These Temples were situated in a healthy locality with good sanitary surroundings. Epidaurus was the great seat of worship of

Aesculapius, who was supposed to cure all kinds of disease. It is said that this temple was crowded all the time with such persons who placed themselves under the care of the Aesclepidae, or disciples of the god. A certain course of treatment followed, which, it is said, was directed by Aesculapius through dreams. Records of patients were kept on tablets, some of which have been unearthed and are mostly statements of miraculous cures. In these Temples baths and gymnasiums were provided and the plan of treatment, it is said, was more or less scientific. It is evident however, that faith in the god was the chief reliance for their cures. Notwithstanding their belief in mythological divinities, it is the Greeks to whom we are indebted for our present formulated system of medicine. Hippocrates, the father of modern medicine, was a descendant in a direct line from Aesculapius. Almost every ancient nation had its medicine god, who was probably the legitimate outgrowth of their religious beliefs. This was especially the case in Egypt, India and Assyria.

Esmun, of the Phoenicians, has been regarded as essentially the same as Aesculapius of the Greeks. It is asserted that Esmun belonged to Noah's family and to have been the eighth and chief of those spared by the deluge. If this be true it is an interesting fact from a psychological point of view that his descendants should within so short a time worship him as a god and attribute to him such great supernatural power.

Anubis, of the early Egyptians, and Aesculapius were possibly the same. Anubis in very early times was probably the same as Thoth, who was symbolic of the fixed star Sirius, whose first appearance in the morning was the signal of the advent of the warm season and the overflow of the waters of the Nile, and from this fact it is thought to have been the result of the flood. This star of warning was symbolized by the god Anubis in the form of a watchdog.

Thoth was called the guide of physicians, and it is said that he was a writer of some distinction of medical subjects. It would appear from the early history of Egypt that medicine consisted of more than charms. Athosis, son of Menes, who lived four thou-

sand years before our era, was a physician and left anatomical books. There were other gods supposed to be analogous to Aesculapius, but time prevents only mention of Hea, the master of the eternal secrets, who has been given the credit of being the real god of medicine and of revealing medicine to mankind. He was a serpentine god of life and knowledge, and there are very strong grounds for connecting him with the serpent of Scripture and the paradisaical traditions of the tree of life. There were several goddesses of health who were very interesting characters.

In those days disease and epidemics were attributed to the influence of evil spirits and exorcisms were used to drive them away. The Babylonio-Assyrians, like the American Indians, believed in the existence of innumerable bad, as well as good, spirits. It is said that the Chaldeans and others regarded imprecations as effective in causing disease as well as other evils. The Accadio-Sumarian Dibbora was regarded as the leader of the plague demons, and it was believed that he could bring on an epidemic of the plague as the following quotation will show: "Let Dibbora appear and let men be mown down." He was probably the prototype of the destroying angel spoken of in the Bible. All of these deities and their worship by the people of so many nationalities resulted in every conceivable form of worship and of faith cure and finally in that mysterious system of magic in which astrology, astronomy, mathematics and chemistry constituted their chief studies, and the art of working wonders by supernatural power—their chief employment. This system, it seems, had its origin in the Magi, or old priesthood of Persia. Theirs was a sort of planet worship. They claimed to be able to grasp all the mysteries and power hidden in the divine life of nature. As certain gems, metals, etc., were virtually the same as certain planets, or certain divine numbers or times, all of them consisting of matter impressed by the same astral element, it followed that these gems, especially when marked at fit times with the proper planet, spirits, names of god, etc., protected the wearer from disease, evil spirits or death.

"Any object believed to be possessed of a mysterious power of warding off or removing evil of any kind may be regarded as a medical amulet." Hence, a buckeye, a stolen potato, a chestnut, a red string around the neck, or anything whatever which is believed to possess the power of warding off or of curing disease is a medical amulet and, notwithstanding the fact that amulets are extensively used today, they had their origin in the Magi or Persian priesthood of great antiquity.

Medical talismans differ somewhat from amulets. They are charms more powerful. "A talisman is a figure cut in stone or metal at the proper astronomical conjunction and with appropriate magical ceremonies." It especially averts disease and a violent death from the wearer. The talisman also originated with the Persian magicians.

Whether all this had to do with the origin of serpent worship or not I am unable to say but it is very closely connected with it. Serpent worship might be regarded as having originated in the Mosaical serpent in the wilderness which the Israelites were commanded to look upon when they were bitten by a snake and they should be immediately healed. But serpent worship preceeded Moses' time, and tree and serpent worship might have originated in the Edenic tree of life and the serpent who beguiled Eve. Be that as it may, a serpent god was worshiped by the Egyptians before the time of Moses. It seems that it was carried on a pole in the procession of divinities when they were taken out for an airing. Serpent worship existed anciently in nearly every nation. It exists at the present time in the east, especially in India, and it is said to be secretly indulged in, in Italy. Even in our present era a sect of Christians, a faction of the Gnostics, were serpent worshippers. They were known as Ophites and joined the worship of the serpent to the general characteristics of the faith and practice of the Gnostics. They honored the serpent because he tempted Eve to eat the forbidden fruit—an act which they believed to have been highly advantageous to the human race. The serpent is, and has been throughout the ages, regarded as

the most significant of all medical symbols. Just why this is, we hardly know but presume it to have been the result of similar ideas in regard to the serpent entertained by the different primitive nationalities before the mythological days of Greece and other ancient nations, all of which seemed to regard the serpent as wise, prudent, and subtle. The serpent was regarded as being especially the animal through which the soul of man passed in its transmigration from this world to the next; hence, it was thought to be wise. This belief might have given origin to the idea of giving a serpentine form to their chief divinities and especially so to the gods of medicine.

Aesculapius, it is said, assumed the form of a serpent at times, and was taken from Epidaurus to Rome in the form of a large serpent to appease the plague only about two thousand years ago.

"In the groves of Epidaurus, as in the Indian temples and elsewhere among early peoples, the serpent was the genius loci, and hence the Agathodeamon—or good deamon—the bringer of health and good fortune, the teacher of wisdom, and the oricle of future events." Hence, one was kept in every temple.

To make a long story short I will state that the serpent in medicine is meant to symbolize prudence and this view probably originated in the fact that the serpent was regarded by the ancients as both the symbol of life and knowledge.

The founder of the Christian religion was regarded as a healer of disease, but the cures here recorded were under extreme conditions and were miraculous demonstrations of an all-wise power to a deluded people. The Mosaical serpent in the wilderness symbolizes the great physician. Just why a serpent was used for this purpose I do not know, but it might have been this way; as the serpent was instrumental in creating the necessity for a Savior, a healer, so it was used to show his power over death and disease when he should come into the world.

Totemism, as practiced by all primitive peoples, implies a sort of faith healing. The totem was regarded as a protection from

disease and disaster, and was believed to possess the power to cure disease.

There is so much to be said upon the historic relations of faith healing that I might continue almost indefinitely, but I must close, and in conclusion will say that there must have been some cures performed by these mysticisms to have kept these practices from falling into disrepute. Was it through the influence of supernatural power, or the result of the action of some fixed law, which, in their ignorance, the ancients brought into play? Most assuredly, it was the latter—simply the influence of mind over the body. That influence was made active by the suggestions made by the different ceremonies and paraphernalia made use of by the different nationalities; and it is the same at the present time and with all the different methods of operating: but more than all this—the natural tendency of disease toward recovery.

Dr. Slusher Has Not Been Located.

Decatur, Ill., Jan. 2.—Dr. B. F. Slusher has not yet been heard from. Neither has it been learned where he went. Sheriff Thrift still has the warrant charging him with murder of Mrs. Walter Romick, aged 26, mother of two children, and wife of a Wabash engineer. Mrs. Romick died suddenly of septic poisoning after an operation said to have been performed by Slusher. The sheriff has telephoned to St. Louis and other places where the doctor would be likely to go, but has not succeeded in learning anything.

Dr. Slusher left town early Thursday morning, telling his office girl he would return. He said he had received a telegram calling him away, but did not mention from whom the telegram came.

The North American Accident company of Chicago has paid the first claim growing out of the Iroquois disaster. The payment was \$5,000 on the life of Dr. J. A. Oakey of Englewood, who was killed, together with two of his children. The policy did not carry the usual provision of double indemnity for death in a burning building.

Dr. Arthur B. Ancker, the new superintendent of the Presbyterian hospital, appointed to fill the vacancy caused by the retirement of Dr. F. M. Nesmith, assumed his duties recently. He comes from Minneapolis, where for twenty years he was superintendent of the City hospital.

The Clerk of Sangamon County reports 338 births during the quarter ending December 31, 1903.

The following verses composed by a little girl, an inmate of the Jewish Home of Chicago, shows such an unusual amount of appreciation that we take pleasure in reproducing it:

Our Doctor Song.

Tune—"Mr. Dooley."

There is a man who's known to us, a man who's known to all,
A man who always is prepared to answer duty's call;
Throughout the whole United States, wherever you may roam,
This man is known and he is praised in every Jewish home.

Chorus—

It is our Doctor, it is our Doctor,
The greatest man this Home has ever known;
So sympathetic, and so magnetic,
Our Doctor dear, our good, our kind,
our own.

They say that this our Jewish Home's the greatest of its kind.

They say the spirit reigning there you nowhere else can find;

But who has kept this good name up, who's added to its fame;

To make this Home a home indeed, who always has this aim?

Chorus—

Who is it when a child is sick is hurrying to and fro,

Who is it who inclines his ear to every tale of woe;

Who stands for right and puts down wrong where'er it may be found.

Who makes good will and harmony in this our Home abound?

Chorus—

And when the children leave this Home and with the world contend,

When they are sometimes rudely pushed and see they need a friend;

They know of one whose help is near though he is far away,

A man who's helped them out before with little of delay.

Chorus—

And thus you see a man who is a model for us all.

A man who stands both firm and true no matter what befall;

A man who is a friend indeed, and does what-e'er he can,

To make the children happy, he's a truly noble man.

Chorus—

—Anna Koppel.

Col. Philip F. Harvey has been appointed Chief Surgeon on the staff of Brig. Gen. Frederick D. Grant, who recently assumed command of the Department of the Lakes.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

FEBRUARY, 1904.

NEXT ANNUAL SESSION, BLOOMINGTON, MAY 17, 18, 19, 1904.

OFFICERS:

PRESIDENT—CARL E. BLACK, Jacksonville.

SECRETARY—EDMUND W. WEIS, Ottawa.

TREASURER—EVERETT J. BROWN, Decatur

EDITOR—GEORGE N. KREIDER, Springfield.

ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

J. W. Pettit.....Chairman
Ottawa.

E. B. Montgomery....Secretary
Quincy.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

E. M. SuttonChairman
Peoria.

R. W. HolmesSecretary
387 N. State St., Chicago.

Committee on Public Policy and Legislation.

P. M. WoodworthChicago

L. C. TaylorSpringfield

H. C. MitchellCarbondale

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

J. W. Pettit, Ottawa.

E. M. Sutton, Peoria.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

Term Expires 1904.

(2) W. O. Ensign, Rutland.

(6) L. J. Harvey, Griggsville.

(9) J. C. Sullivan, Cairo.

Term Expires 1905.

(8) H. C. Fairbrother, E. St.
Louis.

(5) W. K. Newcomb, Cham-
paign.

(3) J. F. Percy, Galesburg.

Term Expires 1906.

(7) C. Barlow, Robinson.

(1) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

The Pres. and Sec'y, Ex-Officio.

THE SYMPOSIUM ON TUBERCULOSIS.

Chairman Pettit reports that the work is progressing satisfactorily. Every one that has been asked to assist has responded with such alacrity that the work is to him a pleasure instead of being a vexatious burden as is so often the case when an enterprise of this magnitude is undertaken.

The essayists thus far selected are Drs. Frank Billings, H. N. Moyer, R. B. Preble, Geo. W. Webster and Chas. L. Mix. They have been selected not alone for their eminence in the profession but because of their great interest in the cause and their peculiar fitness to deal with the special topics assigned them. Their acceptance insures the most complete and practical symposium ever presented to any society on this subject.

The officers of the Section are gratified to have the assistance of the State Board of

Health which, unsolicited, has unanimously indorsed its action and placed the resources of the Board at its disposal. (See correspondence from the Secretary in another column). This provides for the collection and arrangement of reliable data so necessary for intelligent action when it comes to the practical question of how to deal with this great question in this State.

CALLED DOWN.

Shortly after his graduation at that fountain of medical learning, the Homeopathic Medical College of Chicago, class of 1903, a young man opened up in Freeport and began "to raise the wind" by advertising himself as "formerly of the New York Polyclinic and Hospital, clinician in genito-urinary and skin diseases at the Chicago Medical College, contributor to the New York Medical Record and Medical World, qualified and

equipped for the effective treatment of long-standing and chronic diseases." In other words this modern Hippocrates was a universal specialist.

Not satisfied with this grandiose announcement he caused the following reading notice to be inserted in the Freeport daily paper:

The physicians of this vicinity have equipped a laboratory in which the analysis and diagnostic work of this section will be carried on and which will be known as the Physicians' Laboratory. It will be operated under the direction of Dr. X.

This was done evidently without the knowledge or consent of the profession of Freeport for two days later twenty-eight of them united in printing the following:

A Denial.

Apropos a certain article inserted in the daily press of last Saturday's edition of the city advertising the so-called 'City Physicians' Laboratory,' purporting to be supported by the medical profession of the city, and naming a certain individual as having been appointed director of the same, we desire to emphatically deny our connection in any manner with such an institution, or that it is representative of the medical profession of Freeport as a whole, and we also desire to depreciate such methods to mislead the public and seek public notice as unbecoming the dignity of our profession.

From this it is safe to say that the "Physicians' Laboratory" will not be overburdened with analytic and diagnostic work from that section.

THE NEEDS OF THE STATE INSTITUTIONS OF ILLINOIS.

As the institutions for the Insane are the most important of State charities numerically, so they are also most important medically.

All the Illinois institutions are managed on the usual American plan with a board of unpaid trustees and a medical superintendent who exercises both the functions of a medical and of a business manager. The care of the institutions has these two distinct aspects and it is one of the urgent problems of hospital management; how to separate the business from the medical management without intro-

ducing a conflict of authority—how to manage the business economically and effectively and leave the superintendent free for medical and scientific supervision. Our neighbors Iowa, Wisconsin and Minnesota have attempted a solution by creating boards of control to manage the common purchases and contracts of all the charitable institutions. New York has had for over three years a special commission in Lunacy which manages the institutions for the Insane of New York with their 23,000 patients and even correlates the medical and scientific work.

It is plain that our institutions can never be inviting to the most highly qualified physicians so long as the tenure depends upon the capricious factor of political "pull," and so long as a man must be head steward, farmer, purchasing agent, in short, general factotum, before he can command any time for even knowing his patients individually, while to exercise his true and most important function, i. e., to direct the care of the patients, to lead investigations, to keep up the medical spirit, is a sheer impossibility. This leisure for the exercise of medical supervision is the more necessary in the Illinois Hospitals because they are so large. A superintendent with from 1,000 to 2,300 patients could not possibly have an intelligent acquaintance with each one even if he had nothing to do but to walk the wards and it is all the more imperative that he be a man of scientific mind, able to inspire and lead his subordinates. It is safe to say that the basal need of the institutions medically is the release of the superintending physician from business and from politics.

The various expedients by which this has been accomplished elsewhere and may be accomplished in Illinois are perhaps too complicated for full discussion here but we may say that the New York Lunacy commission as originally created and operated—before

the bureaucratic methods of the present governor were fastened upon it—did result in economy, in a more scientific spirit and in equalizing conditions. This equalizing of conditions in various hospitals is a measure of justice. Taxpayers have a right to as much for their money in Anna as in Kankakee. An insane man in acute mania or melancholia has need of precisely the same care and skill in whatever part of the State he lives. If it pays to use hydrotherapy in one hospital it pays in all.

Under normal conditions the last ten years should have witnessed a movement forward in the Illinois institutions from the very respectable position they occupied up to 1893. Unfortunately a review of the period shows many losses which must be made good before she can even retrieve her old position:

First, if the hospital for the insane is to be in fact a hospital it must have interior hospital organization—it must have internes and a superintendent and a staff capable of training them.

In 1893-4 internes were chosen by severe competitive examinations held under the auspices of the State Board of Charities, and the successful competitors were assigned to the various hospitals. Some excellent men now in the various branches of public service thus began their careers. When the State administration changed, the interne system was summarily dropped and has never been restored. Second, about the same time that internships were established, women physicians were placed in all the hospitals. They have long since gone. Yet if there is any argument to be made for the need of women practitioners it cannot apply more strongly anywhere than to the woman's side of every hospital for the Insane. The law of New York requires them.

Third, there was a beginning of that training of pathologists which is essential to scien-

tific work: one hospital had a well-conducted laboratory which long before this should have coördinated and centralized the pathological work of all the institutions, or should have grown to a separate institution like the New York Pathological Laboratory. Instead the work has fallen into decay and must be built up afresh.

Fourth, there was also in one institution a beginning of that use of women nurses in the care of men patients which is one of the marked characteristics of the most progressive care for the insane in Europe and to a lesser extent in this country. There was also in the same institution some effort to establish an efficient visiting service. All these advances upon the old fashioned asylum have disappeared so far as we are informed.

Thus the institutions for the insane have receded from their earlier position in important particulars. But more important still, while we have added two institutions and have probably somewhat increased the capacity of each one of the existing hospitals we have done nothing toward creating an adequate and general system of differentiated care and supervision. The law regarding the supervision and licensing of private institutions is a dead letter; the supervision of State institutions is slight, and supervision of county poor houses is nominal. We cannot ignore the tendency toward State care shown by the Bartonville institution which was planned to provide for 2,000 chronic cases, previously regarded as legal county charges, nor the need of some carefully elaborated system covering all the insane in Illinois.

The so-called hospital of the conventional type can no longer be considered a complete expression of the State's duty toward the insane. Psychopathic wards in general hospitals and special hospitals for acute cases already exist in various parts of the civilized world, and we cannot afford to ignore their

value. At the other end of the gamut is the heavy burden of chronic cases who can't be benefited by confinement. For these people we need the village and family care, rural life organized on a basis approximating that so successful in France and Belgium.

Various bills affecting the State charities were introduced in the last legislature and doubtless will be re-introduced in the next. This is especially true as to bills providing for a merit system of appointment and a board of control. As we have said in a previous issue of the Journal, an adequate merit system is the *sine qua non* of any permanent improvement of our charitable institutions. In our opinion the bills introduced in recent years for a board of administration, or for a board of control do not go to the root of the matter. They are all narrow and inelastic. They none of them offer a broad and well considered system of management even for the hospitals for the insane to say nothing of the 10 other heterogeneous institutions which the State carries on under the general title of State charities. We believe that the opening of the next legislature should be the signal for the appointment by the Governor of a commission of physicians to which might be added representative laymen. It should be the duty of this commission to make an immediate and thorough inquiry into the best methods of administering the medical and business concerns of the State charities, and to report a plan to the Governor and the legislature. We believe that an authoritative commission could do the State and the cause of medical science a lasting service. As we have said previously these institutions must look to the medical profession for inspiration and guidance. They are growing to enormous proportions, whose limit no one can foresee. Their expense is already the heaviest burden of State taxation. The question of their wise, humane, scientific and

economical control is important enough to enlist the attention of the best experts in the State, and we believe the time is ripe for doing this. We trust that the State Medical Society may take the initiative in this matter by appropriate resolutions at its next annual meeting. We are confident that the general public and the press would approve such a commission, and upon its report a legislature might safely act.

OUR ADVERTISERS.

We take pleasure in calling the attention of our members and readers to our advertising columns which show a slow but steady growth. This growth would be much more rapid could we induce our members to call the attention of those firms with which they deal to the desirability of their being represented in the Journal. Another important point is for our readers to deal as much as possible with firms represented in these columns, and also to always say in writing to them or conversing with their representatives that they have been induced to patronize that particular firm because its advertisement was noticed in the Illinois Medical Journal.

As regards the class of advertisements to be accepted for the Journal it is no easy task to satisfy the wishes of all our members. Some of them desire to take any and all kinds of advertisements with the idea of getting the largest possible revenue from this source. Others, and we have reason to believe the great majority, desire to have the manager and editor use a reasonable circumspection in admitting advertisements. In this connection we will quote the following language from the California Medical Journal which has had remarkable success with its advertising columns. The editor says:

"The stand taken that only ethical matter could find place in the advertising pages has been productive of the best results, and

proves that decent advertising is not only possible, but is profitable in the end to the medical journal that refuses to contaminate its pages."

We should be more than pleased to have our members express themselves on this important topic for it is the single wish of the management to accurately reflect the sentiment of the members of the Society in this as in every other department of the Journal.

CORRECTION.

By an unfortunate error due to peculiarity of the author's writing, Dr. Frank S. Churchill was made by the proof reader to appear, in the last issue of the Journal as an ex Instructor of Pediatrics. Dr. Churchill is, as is well known, an actual Instructor in Pediatrics at Rush Medical College (University of Chicago) and we take pleasure in making the correction.

Correspondence.

January 13, 1904.

Geo. N. Kreider, M. D.,
Editor Illinois Medical Journal,
Springfield, Ill.

My Dear Doctor:

I beg to hand you herewith a copy of a resolution adopted by the Illinois State Board of Health at its annual meeting held on the 12th inst.

Very truly yours,

J. A. Egan.

Resolutions Adopted by the Illinois State Board of Health, January 12, 1904.

Whereas, The Illinois State Medical Society proposes to present at the next meeting to be held in Bloomington in May, 1904, a practical symposium on tuberculosis, which will include statistics regarding the prevalence, the mortality, the influence of climate, the topography, the occupation and such other data as may be found necessary, the statistical features to be confined to the State of Illinois, special attention being devoted to the prevention and treatment of the disease, and

Whereas, The presentation of this subject by the Illinois State Medical Society will undoubtedly result in great good and will be the

means of arousing the people and the law-makers of the State to the necessity for the adoption of measures to prevent the further spread of this disease, which has been properly termed the "Great White Plague," therefore, be it,

Resolved, That the Illinois State Board of Health hereby expresses its hearty approval of the work undertaken by the Illinois State Medical Society, and be it further,

Resolved, That the Secretary of the State Board of Health is hereby directed to co-operate to the best of his ability with the Illinois State Medical Society in this undertaking and to furnish the Chairman of Section One through whom this symposium will be presented, with such data concerning the prevalence and mortality from tuberculosis in Illinois, as may be needed, sparing no reasonable expense to secure and to properly present the same, and be it further

Resolved, That a copy of this resolution be sent to the President and Secretary of the Illinois State Medical Society the editor of the Illinois Medical Journal and to the Chairman of Section One.

Peoria, Ill., Dec. 22, 1903.

To the Editor.

Dear Doctor: In the December number I read of an inquiry about H. D. Easterly who claims to be organizing an insurance company to be known as "The Peoria Health and Accident Co."

If there are any of Mr. Easterley's victims who desire to meet him, they can find him at the Observatory Bldg. this city.

Mr. Easterly claims to have a state charter, and doubtless is still looking for medical examiners. Easterly has worked this same plan of getting business for several years. At one time while representing a Springfield Life Ass'n. he appointed quite a large number of medical examiners here, collecting six months premiums and giving them months receipts. It would be well for the profession of this State to remember the name of Easterly and the Peoria Health and Accident Ass'n.

Respectfully,

W. R. Allison.

Robinson, Ill., Dec. 24, 1903.

To the Editor.

Dear Doctor: Believing that a few notes from the Councilors regarding the doings of the profession in their respective Districts would be of interest to the profession throughout the state, I hand you herewith,

not a report but a few items calculated to give some knowledge of the workings of the profession in the Seventh Councilor District. There are ten counties in this district. At the beginning of the year only five of them were organized. Now they are all organized but one, and the preliminary steps for organizing it have been taken.

The four counties organized during the year will all meet the requirements of the State Society and become component societies, and most all of them I might say have shown a good deal of enthusiasm in their work and are very promising, even vigorous youngsters. As the success of any society depends very much upon the activity of its secretary, and knowing the secretaries of the societies as I do, I predict unusual success for all these new organizations. I also wish to suggest that the secretaries who are the official reporters for the Illinois Medical Journal send in reports of their respective meetings with promptness and precision, using as much brevity as is compatible with an intelligible report of the meetings. I wish also to state that all these new societies who pay their dues, \$1.50 per member, to the State Society, Dr. E. W. Weis, Ottawa, between now and the first of April, 1904 will be entitled to the Journal and membership in the Society until April, 1905. Efforts will be made to organize the remaining unorganized county by the close of the present year. And when the councilor districts are organized, we hope to go into the district meeting with representatives from the ten counties representing the seventh district.

I also wish to suggest that each member who pays dues be promptly supplied with a copy of the Journal.

Respectfully,

C. Barlow.

Councilor for the Seventh District.

State Items.

The extent of the work of the hospital of St. Anthony of Padua, West Nineteenth street and Marshall boulevard, Chicago, conducted by the Franciscan Sisters of the Sacred Heart, is shown in the annual report. During the year

1,099 were treated. December 31, 1902, there were 51 inmates of the hospital; 948 were admitted during 1903, and 100 outside patients were cared for. There were 114 deaths, of which 40 occurred within three days after admission. The superior, Sister M. Lioba, recorded 1,753 night watches during the year.

Dr. P. N. Bowman has removed from Virginia to Canton.

Dr. Brownback, of Ashland, contemplates removing to Virginia.

Among those who recently passed the examination of the Board of Pharmacy at Springfield, and became Registered Pharmacists was Dr. G. C. Meacham, of Taylorville.

President Harper, in his decennial report of the University of Chicago recently issued has suggested colossal plans for the medical department involving an outlay of \$6,350,000. He desires to have the addition of three new clinical departments, medicine, surgery and obstetrics, the erection of new laboratories on Marshall field, opposite the Hull biological laboratories, the provision of a temporary dispensary near the university; the provision at the earliest date possible of five hospitals for medicine, surgery, obstetrics, children's diseases, and contagious diseases, to cost, with endowment, \$1,000,000 each; the raising by Rush Medical college of \$1,000,000; the completion of the group of buildings of which the Senn memorial is the first part, cost \$350,000; the organization of a school of dentistry and a nurses' training school.

Twenty-five candidates recently took the civil service examination for the position as head of the sanitary inspection bureau of Chicago. They pronounced the test difficult. It covered almost every branch of general hygiene, sanitation, and legal knowledge of duties. Among the questions were the following:

Explain the germ theory of disease in its modern aspects.

What are the most prevalent diseases in cities and by what sanitary measures can these diseases be most effectively combated?

What is the latest opinion concerning the dangers to health from leaky plumbing and broken drains?

What are the dangers of poisoning from small quantities of illuminating gas escaping from the ground?

What part do insects play in the transmission of infection?

What do you understand by the term "cleanliness" as applied to streets and alleys, to the schoolhouse and other public buildings, and to the ordinary dwelling house?

What is your scope of work?

Dr. H. L. Alford Disappears.

Mrs. H. L. Alford, 140 Washington boulevard Chicago has asked the police to assist her in finding Dr. H. L. Alford, 75 years old. The physician, who has retired from active practice, went away one evening recently, telling

his wife that he was "going downtown." Since then nothing has been heard from him.

State Board of Health.

The state board of health held its annual meeting, January 12, at the offices of the board in the state house. The following officers were re-elected: President, Dr. George W. Webster, of Chicago; treasurer, Dr. J. T. Sullivan, of Cairo; secretary, Dr. J. A. Egan, of Springfield. Routine matters and the work done during the past year were discussed.

Hydrophobia at Peru.

Fearing they may be infected because of nursing a man who died of hydrophobia, Dr. S. Hirsch recently took a family of four persons from Peru, Ill., to the Chicago Pasteur institute at 228 Dearborn avenue, where they are under treatment. The patients are: Mrs. B. G. Seebach, 48 years old; Miss Hattie Seebach, 18 years old, her daughter; Mrs. Samuel Waugh, sister of Mrs. Seebach and Miss Edna Gibson, domestic.

B. G. Seebach, head of the family, died of hydrophobia. He was a druggist and attempted to cure himself. A physician was called too late. Mr. Seebach was a dog fancier, and is believed to have been bitten by one of his animals. All of them, valued at nearly \$2,000, were killed after his death.

Desertion Laid to Dowieism.

Mrs. G. G. Williams and her six children, deserted by husband and father, were found without food or money recently at their residence in Waukegan. Mrs. Williams declared her husband had left her so that through suffering she might be forced to accept Dowieism.

The woman said her husband joined the Christian Catholic church four years ago in Girardville, Pa., and moved to Waukegan a year ago to be nearer Zion City.

"I never shall join Zion, if I have to go out on the street and die," said Mrs. Williams. "I cannot believe in the teachings and would not have come here but for the sake of my children. We have been left destitute. I am a Baptist and never shall believe in Dowie, whom I consider a false prophet."

There appears to be a regular epidemic of hospital building in Illinois just now. Among the hospitals building or enlarging are in Chicago:

The Frances E. Willard Temperance Hospital, on South Lincoln St. It will cost \$50,000.

The Augustana Hospital addition. It will cost \$150,000. It will be located in the triangle formed by Lincoln and Cleveland avenues.

A new children's hospital at the Cook County Hospital to cost \$75,000.

A new morgue and pathological laboratory at Dunning to cost \$12,000. Five cottages for the insane and three isolation houses for consumptives are also being erected to cost \$32,000.

New Englewood Hospital.

The Hospital Daughters of St. Joseph, 6353 Harvard avenue, are going to start work as soon as plans are made on a four story fire-

proof hospital, to be erected on the east side of Harvard avenue, between Sixty-third and Sixty-fourth streets. It will be 180x80 feet, pressed brick and stone front, and will contain about eighty rooms and five wards. The cost will be \$80,000. The Sisters come from Kingston, Can.

New institution to be built at North Forty-third avenue and George street for St. Joseph's Orphan asylum, now at Fortieth and Belmont avenues. The various buildings will include a three story fireproof hospital, 60x170 feet in ground dimensions; two story chapel, 62x32 feet; and a one story power and laundry plant, 42x40 feet. The total cost is estimated at \$80,000. Work is to be started early in the spring.

At the Cook County Hospital during the year 22,227 patients were cared for and 19,430 were discharged as cured. Deaths numbered 1,996, and 801 persons remain in the hospital. Supplies, improvements, and repairs cost \$128,400, and salaries amounted to \$128,400. The total cost of maintenance was \$312,920, and the daily cost for each patient was about \$1.

Chicago Hospitals to be Inspected.

An inspection designed to correct defects in hospital buildings was started by Inspector Doherty, who will work with inspectors for the health department. It is not the intention to order any hospitals closed until they have been given time to remodel interiors and erect fire escapes. The hospital inspection, it is believed, will continue during several weeks.

The Springfield Hospital has just occupied a new wing, doubling its capacity. It cost \$20,000.

Wisconsin Takes Action Against the Medical Colleges of Chicago.

Milwaukee, Wis., Jan. 12.—(Special.)—The state board of medical examiners today decided to refuse licenses to graduates of three Chicago medical colleges, as follows: The National Medical university, the Harvey Medical college, and Jenner Medical college. Members of the board say they have conducted investigations of the courses of the three colleges and have found the institutions are night schools and their courses not up to standard. They also are conducting investigations of other colleges in the west and south, and say all will be debarred that do not come up to standard. The Chicago schools that were barred today have quite a number of graduates in the state. President Currens of the board said tonight these would not be allowed to practice in Wisconsin. He says the board has prepared cases against sixteen doctors who are graduates from unrecognized schools, and these doctors will be prosecuted also. Six of the doctors are in Milwaukee, and their cases have been laid before the district attorney, who will proceed at once.

Commenting on this matter the Journal of the American Medical Association has the following:

"The president of Harvey Medical College is reported in the Chicago Tribune, January 13, to have stated in an interview in defense of the graduates of that college:

In the ten years of our existence, among the hundred graduates we have sent out, only two have failed to pass the state examinations cred-

read: "That all honorable physicians, whose practice does not conflict with the requirements of the revised principles of medical ethics of the American Association, are eligible to membership in this Society."

The proposed amendment was laid over according to the constitution until the next meeting.

Dr. Housh read a paper on **Elbow Fractures**. The paper was discussed by Wiggins, Nifong, Lillie and Whitmer.

Wiggins commends the paper, and calls attention to a diagnostic point in "T" fractures of the elbow which he thought was not brought out sufficiently clear in the paper, and that is the great width of the condyles; another point is the shortening of the forearm; while in the supracondyloid fracture the whole arm is shortened. Thinks it not good practice to place an arm in extreme flexion at once, if at all.

Nifong cannot agree with the recommendation of the cravat bandage in extreme flexion, as it does not put the parts to rest.

Lillie commends the paper, and offers a strong argument in favor of a more general use of the X-Ray as an aid to diagnosis.

Whitmer says the "T" fracture is the one which calls for the flexed position. In extension the olecranon is driven into the fracture and the condyles separated, while flexion holds them at rest.

*
* **Wayne County Medical Society.** *
*

Regular meetings are held in Fairfield the second Wednesday of each month. Membership 11.

Officers.

President Wm. M. Johnson, Johnsonville
Vice President J. D. Harlan, Fairfield
Secretary J. P. Walters, Fairfield
Treasurer F. Bean, Fairfield
Board of Censors—W. C. Sibley, Fairfield; T. J. Hilliard, Jeffersonville; E. B. Garrison, Wayne City.

In answer to a call made by some of the physicians of the county, a number of them from different parts of the county, met in the court house at Fairfield, Tuesday, November 24, 1903.

A temporary organization was affected by electing Dr. Wm. M. Johnson chairman, and Dr. J. P. Walters, secretary.

As Dr. J. P. Walters had been in correspondence with Dr. C. Barlow, of Robinson, the counselor for this district, he was called on to state the object of the meeting and to give the plan of organization, which he proceeded to do, reading some of the letters from Dr. Barlow and extracts from the by-laws and constitution of the State Society, showing that the county society becomes a component part of the State and National Societies, and that eligibility to the State and National Societies is through the local or county society.

Dr. J. D. Harlan moved that we proceed to effect a permanent organization, according to the plan as devised by the American Medical Association at New Orleans last May. The

motion prevailed without a dissenting voice and the officers were elected.

Remarks on the organization were made by Drs. Hancock, Harlan, Sibley, Bean, McDonald, Shastid and Cates. Dr. Hancock stated that as he and several other younger physicians of the county had never been members of any medical society, he desired to be informed as to the benefits and advantages to be derived from the association. The president gave us a very interesting speech, brought out by the remarks of Dr. W. A. Hancock, explaining very fully and clearly the legitimate objects and uses of a medical society.

According to the constitution each member pays annually dues of \$1.50, which is forwarded to the secretary of the Illinois State Medical Society, and entitles him to the Illinois Medical Journal, which is the official journal of the society.

A motion that the board of censors be also the executive committee and the committee on program, prevailed.

After signing the roll and payment of dues the meeting adjourned to meet at the same place the second Wednesday in December, 1903.

* **Champaign County Medical Society.** *

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President S. S. Salisbury, Champaign
Vice-President W. L. Gray, Champaign
Secretary and Treasurer Jas. S. Mason, Rantoul
Censors C. H. Spears, H. E. Cushing, Champaign, and J. A. Hoffman, Pesotum.

The annual meeting of the Champaign County Medical Society was held in Champaign, Thursday, December 17, 1903.

After reading and approval of minutes the business part of the program was disposed of in order that those arriving late might have the benefit of the reading and discussion of papers.

A nominating committee composed of Drs. Wall, Martin and Matheny placed names of nominees before the society. The nominations received the vote of the society, and were constituted the officers for the ensuing year.

The annual report showed a gain in new members of thirteen, a loss by death of two. There was an average attendance for the year of twenty-one.

Total funds for the year \$91 48

Total disbursements 86 23

Balance \$5 25

The subject of back dues was given an important hearing, and met with a good response. There are yet a few members who should make right on the subject of "back dues," in order to comply with the conditions of membership as specified in the by-laws of our association.

Following the business session came the reading of a paper entitled **Some Diseases of the Stomach, Their Diagnosis and Treatment**, by H. E. Cushing. The essayist confined himself largely to that class of stomach disorders, not

successfully yielding to therapeutic measures, and not yet commonly considered of surgical import. He held that surgical intervention as a diagnostic procedure alone in certain of these cases is justifiable and demanded, and that such a procedure enables the surgeon in the cases demanding surgical aid to render it in the simplest and most satisfactory way—illustration. The relief afforded chronic gastric ulcer, with symptoms of stenosis or dilation or both, by a gastro-enterostomy supplying drainage of the stomach with rapid healing of diseased areas and recovery.

The paper was one of the most important read before our society and elicited general discussion. (No synopsis of the contents of the paper is here attempted).

At the close of discussion Dr. Newcomb brought before the society the question of the advisability of our society favoring the state plan of a co-operative protective organization, furnishing protection to its members against damage or malpractice suits. After some discussion Dr. Gray offered a resolution, that our council be instructed to favor such a plan in or through the State Society. The resolution received the vote of the members present.

Members present at the meeting: Drs. Wm. Reese, Omar Reece, Purcell, Mandeville, Johnson, Foelsch, Newcomb, Jennie Lyon, Hough, Spears, Craig, Wall, Miner, S. W. Shurtz, Martin, Schowengerdt, Kincheloe, Matheny, Mason, Powers and Cushing.

 ◆
 ◆ **McLean County Medical Society.** ◆
 ◆

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President F. C. Vandervoort, Bloomington
 Secretary A. F. Kaeser, Bloomington

The County Medical Society met at the city hall in Bloomington, Jan. 7, 1904, with the president F. C. Vandervoort in the chair.

Dr. Mammen made a report for the executive committee.

C. E. Chapin reported for the finance committee that a contingent fund of two hundred and fifty dollars had been provided for the meeting of the Illinois State Medical Society.

Dr. Mammen reported an interesting case of a **cyst attached to the Fallopian Tube** near its inflamed extremity. The problem was that of diagnosing it from appendicitis, cyst of the ovary and broad ligament. The nervous manifestations, which were so marked, were undoubtedly due to the cyst pressing on the surrounding structures. Had the cyst not been removed, certain it is that it would have enlarged and the symptoms have grown more severe.

Dr. Hart reported four cases of smallpox in one family. The first child had no eruption, but all the other symptoms of the disease, two other children had only a few spots, while a fourth child had a very severe eruption. None of these had been vaccinated.

Dr. Vandervoort reported a similar condition in a family.

Dr. Covington the essayist read a paper on **Constipation**. In part the doctor spoke as follows:

This disease or symptom complex is found in all classes. The normal individual should pass from 4 to 6 ounces of feces in twenty-four hours, depending to a great extent upon the nature of the diet, the vegetables giving more than a nitrogenous diet.

For causes we best make use of the two varieties of the disease:

Acute—

1. Intussusception, volvulus, etc.
2. Tumors pressing on the bowels.
3. Deficient Bile, etc.

Chronic—

1. Loss of habit.
2. Tumors pressing on the bowels.
3. Unusual demands of modern society.
4. Lack of proper exercise.
5. Improper food.
6. Insufficient water.

Consequences—

Appendicitis indirectly.

Nervous phenomena, palpitation of the heart. Neuralgias.

Treatment—

No iron-clad rules can be given.

In the discussion which followed many points in handling this condition were brought out.

As regards diet, the patient should eat coarse foods particularly vegetables; take a good deal of salt which will stimulate the desire for water.

Exercise should be taken regularly and persistently.

In constipation of children olive oil or sugar of milk drams ii to v per day, are very valuable.

The secretary was instructed to embody in his report the resolution, which was adopted at the previous meeting, of a vote of thanks and appreciation extended to Dr. Egan for the Reports of Health sent to a number of our members and request him that if possible he send one to those who have not already received same.

 ◆
 ◆ **Livingston County Medical Society.** ◆
 ◆

Regular meetings are held the first Thursday of May and November. Membership 40.

Officers.

President T. O. Bannister, Odell
 Vice President J. J. Stites, Pontiac
 Secretary-Treasurer John Ross, Pontiac

Read before the Livingston County Medical Society at Pontiac, November 5, 1903.

The Obstetrical Hand as a Substitute for Forceps.

E. J. Carroll, Graymont: In preparing this paper, the most difficult task has been to select a title. I thought of heading it "Finger Leverage vs. the Obstetrical Forces," but that subject has its objections, so I have decided to enlarge a little on what I shall call the Obstetrical Hand.

It should be long and soft, with strong, sinewy fingers. It should be kept soft if possible so it can be rolled until it is almost as small as the wrist. It should of course be made perfectly

aseptic before being inserted into the human vagina.

The obstetrician should keep all of his finger nails short and well filed, with the possible exception of the one on the right index.

It is always best to make an examination as soon as practicable after you arrive. Take time to explain that it is necessary to enable you to determine the position the child occupies, presentation, extent of dilation, etc. Wash the hands again and disinfect with some reliable antiseptic. Then gently pass two fingers up to the cervix uteri, and with the ends of the fingers within the rim, separate them to ascertain the amount of dilatation, the thinness of the rim, etc. This will afford the experienced obstetrician valuable information as to about when delivery may be expected; but even then, and "with eyes in your fingers," do not promise too definitely. Regarding the extent of dilation, it may be interesting to discuss its relation to the time the child should be born. I do not remember ever seeing any rule to go by, but in my experience, if you can barely insert the tips of two fingers into the cervix your services are not likely to be needed that night. If you can separate the fingers sufficiently far to indicate that the cervix is the size of a quarter, with thick edges, do not be too sure you will be needed, for I have estimated more than one cervix almost the size of a half dollar and still found it was "a false alarm." Now you may take your time and attend to whatever may require your attention later on.

For the sake of discussion I will state that a dilatation the size of a quarter generally takes six to eight hours and a dilation the size of a half dollar, about three to six hours, with of course, great variation according to age of the mother, her general condition and willingness to get down to business.

As the labor progresses sit on the bedside and allow the patient to pull on your hands during contractions. Give her credit for every honest effort and it will encourage her, and cause her to work with better heart. In no case has the doctor such complete mastery over the helpless. He may want to get away on personal business or to attend some social function. If he claims it was "the worst case he ever saw," who can gainsay him? God forbid, gentlemen, that any doctor should jeopardize the lives of the helpless by undue haste, by administering any medicine to force contractions, or by resorting to obstetrical forceps to further his own private ends. That the obstetrical forceps are necessary at times, I do not for a moment deny, but that they are too often used unnecessarily, at the expense of the mother or child or both, is something of which we are all painfully aware. Better wait awhile and assist nature in less hazardous ways.

As this paper is written more from a practical than a theoretical standpoint, it is not my purpose to take the time of this convention with any unnecessary discourse on the positions. I will cut it short by saying that in my experience of some twelve years, the prevailing cause of prolonged, tedious labor, in the great majority of cases, is that the child's head becomes lodged against the maternal pubic bones. Permit me

to say that I have many times dislodged a head so caught with two fingers of my right hand. The *modus operandi* I never heard from platform or gleaned from a book, although it may have been fully detailed long since.

Because it is lubricating and appeals to their reasons, have melted lard or vaseline at hand. Explain as the circumstances require, but whether you carry any vaseline up to the foetal head or not, slip your two fingers over the child's head, and, as the uterine contractions increase, press downward and backward, stiffening your fingers to secure leverage, and bend your body over the bed if necessary, secure all the leverage possible.

It is not the external muscles as a rule that delays labor. Once the child's head is freed from the maternal pelvic bones, labor will proceed.

Finger leverage is not very painful and if you are careful, by encouraging the mother you can deliver a very difficult case successfully and without even administering chloroform.

Here is where the young strong physician, if he only has sufficient knowledge and tact, has the advantage over the old guard, and the long hungry looking doctor, the advantage over his corpulent brother.

Cases: Mrs. Ferdinand R., who lived near Leland, was kept under the influence of chloroform three hours, while two doctors removed a child in pieces. The doctors announced that she could never give birth to a live child of average size, giving as a reason that the pelvis was too small and contracted.

Later she became pregnant again, and was expected to die. Let me digress long enough to caution you never to say that of any woman because you don't know. Those doctors were considered first rate and were badly mistaken as you will see.

This child weighed less than six pounds so her success was thought to be because the child was small.

In due time I delivered Mrs. R. of a larger child. But I should perhaps state that I had to use chloroform early to quiet her from a frenzy she went into. Had to use emollients and finger leverage, but child was born without using forceps.

Their confidence seemed to be inspired for the next year I delivered this woman of a twelve pound red-headed boy large enough to sit up and eat sauer-kraut and speck. Had to administer chloroform early to quiet the woman, who was of small stature, but by pressing downward and backward during pains, the child was delivered without the aid of forceps.

Two years later I delivered this same woman of the fourth child, using no forceps.

Miss ———, the unfortunate girl who became pregnant at fifteen, and whose case nearly resulted in a law-suit. Child hung to one side, and for some reason, ran considerably overtime, she claiming some two and a half months. Applied a tight binder with a roll of cotton, to right the child's position. Instructed her to pull on sheets tied to bed-posts at regular intervals

(although this procedure I do not as a rule recommend).

Labor came on which proved long and tedious. After about thirty-six hours I tried using forceps but failed, and for fear I would lacerate the girl and kill the child, I went back to finger manipulations with internal and external pressure. After four or five hours more, when every body was worn out, a large twelve pound boy was born, which lived, much to the surprise of all.

Gentlemen you will please pardon my use of the pronoun I. What I have tried to remind you of is the safety and value of an educated hand.

*
* **Crawford County Medical Society.** *
*

Regular meetings are held the second Thursday in each month. Membership 24.

Officers.

President J. W. Kirk, Oblong
Vice President C. E. Price, Eaton
Secretary H. N. Rafferty, Robinson
Treasurer C. H. Voorheis, Hutsonville
Board of Censors: W. H. Hoskins, Trimble; G. W. Fuller, Palestine.

The Society met in regular session on January 14, 1904, at the office of Dr. I. L. Firebaugh, in Robinson.

The following members were present: Barlow, Cooley, Dunham, Firebaugh, Kirk, Midgett, Price, T. N. Rafferty and H. N. Rafferty.

After the reading of the minutes of the last meeting the rules were temporarily suspended and Dr. T. J. Edwards was at once elected a member of the Society.

Dr. Frank Dunham read the first paper of the afternoon, his subject being the **Treatment of Chorea**. This was one of the best prepared papers the Society has ever listened to, being especially deserving from a literary standpoint.

All members present participated in the discussion of this subject, and while the routine general treatment was endorsed by all, many valuable points were made along the line of removal of the cause in reflex cases, such as the correction of refractive errors, the removal of hypertrophied tonsils, etc.

The paper of Dr. W. H. Hoskinson, on **Broncho-Pneumonia of Infants and Children**, was read by the Secretary, owing to the absence of the author, and was in part as follows:

Pneumonia is a frequent disease of early life. It is very common as a primary disease, and ranks first as a complication of the various infectious diseases of children.

From an anatomical point of view, acute Pneumonia may be divided into two principal groups, viz.: (1) Broncho, Catarrhal or Lobular Pneumonia; and (2) Lobar, Croupous or Fibrinous Pneumonia.

These two groups differ as to the products of inflammation, the distribution of the disease in the lung, and somewhat as to the parts involved.

In Broncho-Pneumonia the large bronchi are the seat of a superficial inflammation, while in those of small size, the entire bronchial wall is affected. The exudate is mainly cellular, con-

sisting of epithelial cells, leucocytes and red blood cells. In many cases the alveolar septa and interstitial tissue of the lung show marked changes. Resolution is often imperfect, and there is a strong tendency for the inflammation to pass into a chronic form. The lesions are widely and often irregularly distributed, being usually most marked in the region of the small bronchi from which the inflammation spreads. This is largely the pneumonia of infancy. Under two years of age the majority of primary cases are of this variety. After the fourth year broncho-pneumonia is infrequent as a primary disease, although it is encountered throughout childhood as a complication of the infectious diseases. It is essentially a disease of the colder months, although occurring throughout the entire year.

Broncho-Pneumonia affects all classes, but is most frequent in children having poor hygienic surroundings, and in those previously debilitated by constitutional or local disease. Among the acute infectious diseases which predispose measles stands first, followed by influenza, diphtheria, whooping cough, scarlatina, typhoid fever, erysipelas, variola, varicella and enterocolitis.

Holt says that the term broncho-pneumonia describes a lesion rather than a disease, and that this term is to be preferred to either of the others, as it gives prominence to the bronchial element in the inflammation. There are cases in which the parts of the lung involved bear no relation to the bronchi; cases in which we find inflammatory areas irregularly scattered throughout one or both lungs. The parts most frequently involved are the lower lobes posteriorly; next both upper and lower lobes posteriorly; and least common the anterior aspect of either upper or lower lobes. Death may occur at any stage, or the pathological process may be arrested at any stage, and the case go on to recovery. Resolution may take place before any consolidation is recognizable by physical signs, such cases being rapid and complete. On the other hand resolution may be delayed three, four or even six weeks, and still be complete.

In many cases resolution is only partial and there are relapses or recurring attacks, finally terminating in chronic interstitial pneumonia or tuberculosis. Just here it is often difficult to distinguish between those cases which have been tuberculosis from the beginning.

Abscesses of the lung are by no means uncommon, being usually minute and multiple. Sometimes a whole lobe is fairly honey-combed with them. Broncho-pneumonia has no special course, as cases differ much in this respect.

However in the common type, when primary, the onset is sudden, marked by high temperature of the remitting type, with a daily fluctuation of four or five degrees. There may be vomiting, labored breathing from 60 to 80 times per minute, cough, prostration, sometimes cyanosis and occasionally convulsions. Fever usually continues for three or four weeks and seldom ends by crisis. Cough is almost constant and a strong cough may often be con-

sidered a good symptom. Pain is not common and is rarely annoying.

Delirium may be present at any time during the attack. Gastro-enteric symptoms are frequent in infancy. Gaseous distension of stomach and intestines adds to the already embarrassed respiration, and in infants leads to cyanosis or even convulsions.

Broncho-pneumonia is always a serious disease and during infancy very dangerous to life. The prognosis depends largely upon the age of the patient, the surroundings, the previous condition of health, and the nature of the infection. In the secondary form the prognosis is usually unfavorable. It is of extreme importance that we give careful and early attention to every case of bronchitis in an infant.

In the treatment of broncho-pneumonia, the child should be placed in a large well ventilated room, should be dressed in a simple slip, loose about the body and supported by the shoulders. Frequent changes should be made from one room to another, for nothing is more helpful to an infant with pulmonary disease than pure air. A frequent change of position is essential in all cases. The same general rules for feeding all sick children should be followed here.

We should use the oiled-silk jacket, and counter-irritation with mustard when needed. Emetics and expectorants should be used sparingly, and in infants may be better left altogether. Alcoholic stimulants are needed in all secondary cases.

Inhalations are useful to relieve cough and promote bronchial secretion. Restlessness and insomnia are best controlled by cold or tepid sponging. Opium, if given at all, should be used only for relief of pain. For sudden attacks of general collapse with cyanosis, put the child in a hot mustard bath, given strychnia and nitroglycerin hypodermatically and inhalations of oxygen, if at hand.

Hygienic measures are of greatest importance, and mild cases may need no further treatment. During the later stages, the principal danger is from exhaustion, which fact forbids the use of all depressing measures, and warns us to give careful attention to the nutrition of the patient. In protracted cases, with delayed resolution, change of air probably offers more than medication.

No method of treatment, so far as I know, can be accepted as specific; but rest, fresh air, appropriate nourishment, with ample protection to the chest, are of first importance in the successful treatment of a case of broncho-pneumonia.

Dr. C. Barlow read the third paper of the afternoon, his subject being the **Diagnostic Significance of Pain**. Dr. Barlow succeeded in presenting an admirable paper on a rather difficult subject, and brought very forcibly to our minds the anguish caused by this thing we call "pain;" the confusion it may make in the mind of the doctor; and, best of all, the sign-posts which should guide him in properly locating the origin of reflex and referred pains, thus avoiding many mistakes in diagnosis.

The constitutional amendment offered at the last meeting making membership consist of "affiliating" and "social" members was voted

on, and lost, after a full discussion. The committee appointed at the last meeting to draft a new fee bill made its report, which was accepted, the individual items to be discussed at our next meeting.

Dr. J. W. Kirk reported a case of facial erysipelas in a child which showed as a complication an incipient broncho-pneumonia. He injected a full dose of anti-streptococcic serum twice in twenty-four hours, which treatment was followed by rapid recovery from both the primary disease and the complication.

On motion the Society adjourned.

*
* Sixth Councilor District. *

A meeting of the Sixth Councilor District, Dr. L. J. Harvey, of Griggsville, Councilor, was held at Jacksonville, January 14, taking the place of the regular Morgan County meeting. This district comprises the counties of Mason, Morgan, Sangamon, Cass, Christian, Calhoun, Logan, Menard, Greene, Jersey, Macoupin, Pike, Scott and Montgomery.

The meeting was held in the Assembly Room of the Public Library. Sixty-two physicians were present, representing 11 out of the 14 counties in this district.

The following program for the afternoon was carried out, with slight variation:

Report of Secretaries of County Societies.

Response, Dr. J. N. McCormack, Bowling Green, Ky.

Myocarditis, L. C. Taylor, Springfield.

Some Thoughts on Medical Organization, J. L. Lowrie, Lincoln. (See below).

Urticaria, R. H. Main, Barry.

Acute Lobar Pneumonia, T. J. Pitner, Jacksonville.

A car was in waiting at the close of the program to take the physicians to the Central Hospital for the Insane, where they were shown through the building and entertained at luncheon as guests of the hospital staff.

The banquet at the Pacific hotel in the evening with covers for 60, together with addresses from Dr. J. N. McCormack on Medical Organization and Dr. Hugh T. Patrick, on Traumatic Hysteria, was the culmination of the meeting and was an event of great enjoyment and mutual benefit.

Dr. Patrick presented several cases illustrative of his subject, Diagnosis of Traumatic Hysteria.

Case 1. A physician, 36 years of age, had fallen from a haymow striking his back upon the manger, 15 months previous to his appearance for examination. Paraplegia had developed soon after the injury and still continued. The man resumed his practice being carried in and out of the house to and from his carriage. Fifteen months after came to Chicago and applied to speaker for operation on spine.

Points of diagnosis: Point of greatest tenderness was 12th dorsal spine; hence could not have injured spinal cord, or only the cauda. 2. There was no atrophy of the muscles. 3. Re-

actions were normal. 4. No involvement of bladder or rectum.

Diagnosis: Primary paraplegia from pressure of clot at lower end of spinal cord, which had cleared up leaving a lasting hysterical paraplegia. Result, cure.

Case 2. Passenger on train was injured in a collision. His back was bruised. Still, he walked forward to see the cause and extent of disaster, then to the relief train, walked painfully, at different times for 15 hours, then one-half mile to his home. In the morning could not get up.

Diagnostic Points: Could not be from crush or from hemorrhage, as time elapsed was too long before paralysis set in. 2. No incontinence. 3. "Careful" gait when able to walk a little. Not diagnostic, but exceedingly suggestive. 4. Anaesthesia profound; out of all proportion to motor disability; sharply defined, yet the sharp line, varied in position at different examinations.

Diagnosis, Traumatic Hysteria. Result, cure.

Case 3. Fireman on locomotive fell into tender and was buried under a mass of coal. The handle of his pick was driven into the axilla injuring certain nerves. Was examined 2 or 3 weeks later. There was a very slight movement of hand, with "Sleeve Anaesthesia;" a characteristic sharp and shifting border, but with this, atrophy of the muscles.

Diagnosis: Combined organic and hysterical paralysis. Result, rapid cure of latter and slow cure of former.

Case 4. A workman on motor car was bruised about the abdomen. He walked about for a time, finished his run in an hour or two; reported himself injured and walked home. He was up and down next day, gradually grew worse, and reached the climax in three or four days. He walked into the office with two canes.

Diagnosis and result were similar to those in the other cases cited.

Points of Interest: These cases were men, not women. Had no previous nervous or imaginative history. The element of time elapsed between the injury and the paralysis is of immense diagnostic importance. A sharp shifting border line of anaesthesia and analgesia is characteristic of hysterical paralysis, as is also a region of anaesthesia not covered by any possible nerve distribution.

David W. Reid, Sec. Mogan Co. Med. Soc.

Some Thoughts on Medical Organization.

J. L. Lowrie, Lincoln.

Organization is an infectious and contagious disease, respecting no calling or station in life, from the char-woman to the physician. The basic principles underlying, and ultimate object to be attained thereby, varying with the calling, business or profession.

Since we as physicians are more vitally interested in that which pertains to our own calling, we will only consider this disease as made manifest in our own body.

The primary object of organization among physicians is to formulate such rules and regulations that the rights of all may be equally conserved. This end has been thus far satisfactorily attained through the promulgation of,

and acceptance by the profession of the rules and regulations as embodied in the American Code of Medical Ethics.

Thus far only have we laid our foundation and corner stone upon the everlasting rocks. In all things else from the American Medical Association down to our county organizations, have we reversed the order of building, and ignored the true principles of proper and logical construction, hence are we resting our structure upon shifting sands, subject to the changes wrought by the winds and the waves of an ever varying opinion, therefore are we ready to totter and fall at any moment?

True, we have in a sense realized our deplorable condition in these later years, and are now endeavoring to overcome this fundamental defect in our organization through the fallacious potency of numbers. Gathering the stones from the highways and byways instead of delving deep into the quarry of qualification and fitness, taking each and every measurement carefully, that the principles of fitness, harmony and durability may be wisely considered. Then, and then only, will we as a profession be able to point with pride and satisfaction to the structure we have reared as an enduring monument, glorifying our philanthropy and commemorating the sacrifices we have made, that human life may be prolonged, and the sum total of each individuals portion in the enjoyment of health and pursuit of happiness enhanced to the utmost.

How are we as physicians with our lives devoted to the alleviation of humanities ills and ailments primarily, secondarily their prevention, to attain to our highest ideals, take our proper places and fill our allotted sphere in life story, both as regards our duty to the family, profession and state, meeting manfully the responsibilities devolving upon us in the several communities in which we may live.

The fact that we are primarily physicians must not be ignored. Not Homeopaths, Eclectics, Osteopaths, Vitapaths, or advocates of the thousand and one isms that have since history's dawn strewn Argosy's far famed sea with wreckage.

Let me ask, why is this designation primarily and so distinctively ours. Simply because the history of medicine is in its most absolute sense our history, and because we first demand of its true devotees preliminary qualifications of a high order, both mental and moral, followed by years of arduous work in our college halls and laboratories, that the fundamental principles underlying our chosen vocation in life may be instilled deep into our minds and become a part of our very being.

This is the distinctive insignia of every true physician. Every known agent, means and remedy being his to command and utilize for suffering humanities sake.

This being a self evident and admitted fact. Let us devise means whereby our interests may be fostered, our abilities developed to the utmost, and our prestige individual and collective conserved, selfishness and jealousy eliminated, and a proper spirit of professional respect and pride engendered and fostered. In other words let us so conduct our lives that we can primar-

ily maintain our own self respect, the respect of others will follow as a logical sequence.

Intelligent organization is the corner stone upon which this superstructure must be reared if it is to be as enduring as the everlasting hills. My conception of the means whereby such organization may be attained is briefly, as follows:

Eliminate by force of professional opinion, and lack of support, all medical schools whose requirements and standards are below that which that wisdom, gained by years of experience in practical medicine, has demonstrated as essential to a proper conception of the needs and requirements, qualifying the individual physician for the grave responsibilities devolving upon him. Further demanding, nay insisting that he in the practice of his profession cultivate these high ideals and lend his influence and best effort to their maintenance and up-building. The qualification and fitness of the unit being of a high order and above reproach, then may we logically proceed to group said units primarily into county and city organizations, with such modifications as will best conserve the interests and meet the requirements of the locality. Since as medical men we now realize the full weight and absolute truth of the proposition "In union there is strength," and in this primary and fundamental step in the scheme of organization, let the extremest care and caution be exercised that the chaff and cheat be carefully winnowed from the pure wheat.

Not opening wide our portals to the representatives of every ism and pathy, simply because our law-makers in their ignorance and stupidity and at the instigation of unscrupulous vampires, aided and abetted by good fellows, preachers and sentimental women, have seen fit to espouse their cause giving them quasi-recognition, and a degree of legal respectability.

Figs are not successfully grown on hedge bushes, neither can we meet these factors in our professional life on the basis of equality, without giving to them before the public, the very standing and recognition they so much desire, thereby lowering our own high standards, cheapening our emoluments and trailing our banner in the dust. In fact by so doing we are exemplifying the old plea of the dissolute young man who prays his sweet-heart to marry in order that she may reform him, an argument ample experience has times innumerable demonstrated as utterly fallacious.

Let our demand be, make yourselves worthy of a seat among us, gentlemen, then only will our portals open wide to receive, and the hand of fellowship be extended you.

Our present and existing methods savour too strongly of political practice for the perpetuation of a healthy professional life.

Following at least one years membership in the county society, and a careful inspection of his record and demonstrated fitness by a board of censors elected annually, the physician is prepared to become a member of the district

society, or in other words take his second degree.

And just at this time let me suggest the idea of a division of our great State into, say fifteen councilor districts, each to have its district medical association meeting semi-annually. The annual meeting to be held at least one month prior to the meeting of the State Society. At this annual meeting a councilor to represent the district for the ensuing year shall be elected and instructed as to the needs and requirements of his constituents, and to whom he shall be accountable for his official acts.

Again papers of especial merit read at the meetings of the county organizations constituting the several districts, can be assigned a place on the program for the district meetings. Likewise some papers read each year in the district societies can be with profit recommended to the committee on program for the State organization, thereby simplifying its work as well as proving a stimulus for better and more thorough individual effort in the tributary organizations, since the honor of such selection will prove a prize well worth working and striving for. After one years services as a member of the district society, if the physicians record bear the crucial test required, and he having been found a worker, not a drone in the ranks, his application bearing the endorsement of the president and secretary of his district society, he is now entitled to membership in the State organization.

Following two years probationary service in this society, his qualifications and fitness for promotion to what should be the ultimate aim and desired goal of every true physician's professional life, having been fully and satisfactorily demonstrated. He is now entitled, and eligible to membership in the American Medical Association. An honor that he will appreciate because nobly and earnestly striven for during a series of years, and by him proportionately valued, being a guarantee of his professional standing and moral worth at home and abroad.

Under existing methods every interest is made subservient to numerical strength. A condition that is sapping our vitality, and ere long membership in medical organizations will scarce be considered a badge of honor, since to attain this numerical power we have broken down the barriers that should protect our organizations from the unworthy and base. Today we say to Eclectics and Homeopaths, renounce your dogma, become a member of some county society, that may or may not exist largely on paper, and all the other good things we have in store are yours for the taking, regardless of present fitness by education and experience, or previous condition of servitude to what is regarded, by all honorable and regular physicians as the mammen of unrighteousness.

I ask you in all sincerity, gentlemen, can we as physicians with the best interests of our calling at heart afford to continue this damnable policy without weighing well its ultimately demoralizing and disintegrating effects.

 ◆ Vermilion County Medical Society. ◆
 ◆*****

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8.30 p. m. Membership 40.

Officers.

President Jos. Fairhall, Danville
 Vice-President F. N. Cloyd, Westville
 Sec'y and Treas. E. E. Clark, Danville
 Board of Censors: H. F. Becker, E. A. Johnston,
 W. A. Cochran.
 Committee on Violations of the Medical Practice
 Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

The following paper was read at the meeting in June, 1903:

A Plea for More Thoroughness in the Attempt to Prevent Ear Complications in Certain Diseases, by E. E. Clark, M. D., Danville, Eye, Ear, Nose and Throat Surgeon to Lake View Hospital and Lecturer to the Danville Training School for Nurses. President Tri-County Medical Society.

In order to have an excuse for taking your time to present this paper let us go briefly over a few of the dreadful conditions we hope to avoid by careful and early attention.

I do not believe any one present, who knows me, will accuse me of any feeling of superiority in any sense of the word. In all our work we are careful of details in proportion to the frequency with which our minds are impressed with the importance of these details. Our medical work is rapidly specializing and every advance step in specialization calls for broader men who do the general line of work and in the class of cases we are now discussing you are going to be called on to do more than leave an atomizer with instructions to spray the nose and throat every two hours. One of the first conditions we want to escape is the intense suffering of the child or adult, followed by the middle ear suppuration annoying to both patient and yourself quadrupling responsibility and labor for which you will probably not receive the additional compensation you should; then third the possible fatal complications that hover in the background of every such case. I believe these contingencies could be avoided in over seventy-five per cent of the cases that can be handled and we must be convinced that in some cases it will be absolutely impossible to follow up some of the details of treatment. Certainly this class of cases are numerous enough to be worthy of consideration. Each physician sees the one, two or three cases that follow grippe, measles, scarlatina, etc., and it appears a comparatively small thing but the combined summing up of all cases among the three or four hundred physicians of this contiguous territory is no small thing in the course of a year and as a goodly percent of these cases come under the observation of those who are devoting particular attention to diseases of the ear, we are compelled to feel that there must be quite a number of physicians who may not be quite so attentive to these early conditions as they should be.

It should be a growing pride with us to say "Not that I can successfully handle a large number of these complications but that I can successfully prevent their development." It may

look more brilliant to the parent to see you deal creditably with one of these complications than the less show of ability in your preventing a thing they are unable to see the possibilities of but you have the satisfaction of knowing which deserves the more credit.

There are three things you should ever keep in mind in all pathological conditions which are liable to cause ear complications. First, that there are certain disease conditions that are peculiarly liable to ear complications; second, that these complications are nearly always more or less troublesome and possibly fatally so; third, that they can be and it is your duty to prevent their occurrence.

I have seen a number of acute suppurating ears in which there was apparently no condition of which it was a complication; in such cases I am inclined to think they come from forcibly blowing the nose at a time when there is some specific germ in the mucus of the nasopharynx and is forced up the patulous Eustachian tube and being confined develops and is the beginning of the acute process; here you are in no position to use preventative means for you know nothing until the acute symptoms begin.

In illustration of the above point note following case: While writing this paper a young man came into my office suffering agonizing pain deep in the right ear. He has been perfectly well but three days ago, for some reason, not very clear, he drew up into his nose quite a quantity of tolerably strong salt water which went on back into the throat. On immediately blowing his nose he felt, as he described, a rush of the salt water into the ear followed by severe pain which soon subsided. Last night he suffered with intense pain and today I find a bulging tympanic membrane and upon making a broad incision immediately gave some and later complete relief. After the incision and inflation bloody serum escaped in quantity to run down over the cheek and next day was semi purulent in spite of my antiseptic precautions.

Of the diseases in which we are to be on guard I will but mention for you all know them, repeated cold taking, "grippe," scarlatina, measles, diphtheria, typhoid and pneumonia are the principle ones. Then comes adenoids, polyp and turbinate hypertrophies.

The future physician, who is in harmony with his work, dare not be a lazy man if he expects to win credit where credit is due. The one thing that will for all time give the careless lazy physician any hope for patronage and false reputation is that positive fact that in so large a per cent of cases that call a physician the final result will be just the same as though a physician had never been consulted. Accuracy in details are what will count in the future. The public mind is going to become more enlightened as to what many of these details are and will quickly know when they are neglected. The more the public knows of what we should do the more apt we are to do it and along this line lies the opportunity for the active scientific men to make themselves prominent. Teach your patrons the great importance of thoroughness in examination and accuracy of details in treatment. I have heard intelligent people say with

admiration "why Dr. B. came in and just looked at John and knew what was the matter; wasn't in the house two minutes." Well the time for admiration for quick diagnosis is passing and by our persistent teaching we can cut down the proportion of false reputation made on what nature alone did which makes it appear that the doctor did the work; and I do not mean to depreciate the great service nature does for the most careful of our ranks.

The only instructions I have ever seen in text book or journal are to keep the nose and throat clean with some detergent or antiseptic spray; one place I saw instructions to use cotton on the applicator and mop out the nasal cavities with some cleansing solution. You only have to give a moment's thought or look at a diagram to realize that such procedures are but trifling makeshifts with which to deceive yourselves. You have but to think of the anatomy and physiology to see plainly, how, when the mouth is open for you to spray into the throat the soft palate and vulva rise up and against the posterior wall of the pharynx completely shutting off the naso-pharynx from any part of the spray, and a similar difficulty meets you in spraying into the anterior nares. The nasal mucous membrane and turbinates are engorged and possibly hypertrophied which prevent the spray from entering farther than one quarter to one and one half inch which cannot give you results.

When we talk of an antiseptic spray or wash for the nose or throat we are deceiving ourselves; for Dobel, Glyco-Thymoline, Listerine, Borolyptol, etc. etc., in solutions weak enough to be tolerated by the sensitive mucous membrane of the nose I do not believe would kill the yeast plant. If we can not use strong enough solutions to destroy these specific organisms what can we do; why only wash them away frequently enough to prevent their access through the Eustachian tubes into the middle ear and you can not do this with any kind of spray.

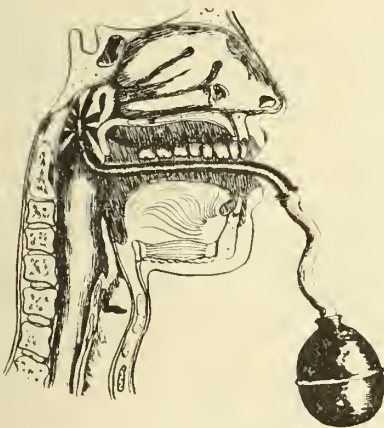


Fig. I.

The accompanying diagrams (Nos. 1 and 2) shows how thorough cleansing can be done. If the mucous membrane of the nose is too sensitive or engorged to allow passage of the

slender soft tip we have our cocaine and adrenalin chloride to positively overcome the difficulty. If retching accompany the use of the post-nasal syringe cocaine will remedy this,

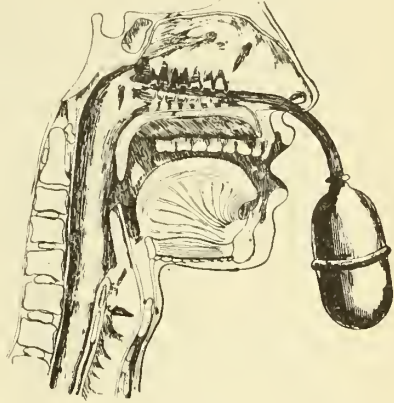


Fig. II.

however the post-nasal syringe can almost always be used without difficulty after a few attempts. I think in many of these conditions, after a thorough cleansing, it would be best to apply or spray cocaine or adrenalin chloride to the naso-pharynx to prevent the eustachian tubes from becoming too long closed up by the continued congestion. The above details are the only ones that can be of value so why waste time with methods that only deceive you.

When it comes to adenoids the only thing to do is operate; anything less is nearly criminal unless the parents refuse your advice. I have had five adenoid operations recently in which two had purulent discharge from the ears that stopped completely after the operation. The operation should be done long before any ear complications have developed. I see in the last number of the Medical Review of Reviews that M. Lapeyre of Fontainebleau says he can depend on Tr. of Iodine in heroic doses to dissipate even large adenoid hypertrophies. It may do it for him but I do not believe it will do it for others. If adenoids are simply enlarged lymphoid tissue and the iodine will exert such degenerative influence on the adenoids why may it not at the same time produce degenerative changes in other lymphoid structures where we would not want it. If you are not sure of adenoids being present make sure it is your duty.

Polypi must be removed and enlarged turbinates reduced or removed.

 * Fox River Valley Medical Association. *

Meets second Tuesday in April and October.

Officers.

President H. J. Gahagan, Elgin
 Vice President Frank H. Jenks, Aurora
 Secretary and Treasurer John F. Bell, Elgin

Read before the Fox River Valley Medical Society by Clark W. Hawley, Professor of Oph-

thamology Post Graduate Medical College, Chicago, Ill.,

Ocular Reflexes—Their Diagnosis.

To recognize that the grosser reflex troubles are very often due to some error in or about the eyes is not usually difficult, and I believe every practitioner should familiarize himself with the general symptoms of ocular reflexes so that he may make the differential diagnosis between them and the extra-ocular forms. I am aware that sometimes the signs are so obscure that even the trained clinician often finds it difficult to advise in the case, yet I am convinced that even then by careful questioning one can find some symptoms that may be a guide to somewhere near a correct diagnosis so that the general practitioner may not be dosing his patients with medicine when the proper care of the eyes would give them relief. And too, the doctor's reputation for knowledge and honesty certainly would not suffer were he able to make a correct diagnosis, because the patient is going to get relief sooner or later by having his eyes looked after, and that may be by the advice of some friend or neighbor and the physician suffers just that much loss of reputation and then they do some thinking that is not always complimentary to their doctor.

In a great many cases they come with the remark "my doctor has done all he can for me and has suggested that you see what you can do." That is a wrong diagnosis and a very unwise way for a physician to send a patient to, a specialist. When the doctor will make himself more familiar with the general symptoms of eye strain, he will not make so serious a blunder as it lowers him in the estimation of his patient, especially if he has been doting them for a long time. Let me illustrate this by one case that occurred in the practice of one of our most prominent men in this city. I select this to show that it is not always the ordinary physician that makes the error of treating a plain simple eye strain for some other trouble. It also shows that they get relief without their doctor's advice.

A young medical student came to me about some outside business and remarked that "he would attend to it as soon as he got relief from his dizzy spells." Of course I was interested at once and asked the character of the spells and he gave me the following history: When he got up in the morning he felt no annoyance, but on returning to his disordered room he had an attack of dizziness. He could hardly cross a busy street for the same reason, often becoming so confused that he would wander out of his intended way. Any unusual commotion would bring on a spell. Dr. L. made a diagnosis of stomach trouble and was treating him accordingly. The young man said he was not conscious of any trouble with his stomach, as he believed he could digest shoe leather. I at once asked by what process did his stomach become conscious of a disordered room or a busy street? and his reply was "through his eyes" and not his stomach that he recognized such things. It was a new thought to him and he asked "if I thought his eyes had anything to do with his condition."

I do not see how anyone could think otherwise, and I was surprised that a man of Dr. L.'s reputation did not recognize it. I worked out his refraction and found a very small error which was corrected with complete disappearance of his dizzy spells.

There was no excuse for Dr. L. making such a diagnosis as a little thought would certainly have put him on the right track. I am not surprised as I sat and listened to Dr. L. lecture and he always accused the stomach of the crime of dizziness.

Taking the reflexes in the order of frequency, headache is the most important and the one for which the patient seeks the physician for relief. In regard to the frequency of headache due to eye strain, I think I will not be far from the truth when I say that of 100 headaches that may fall into your hands to treat, 75 will be due to some disturbed ocular function.

Ocular headaches are not confined to any one locality and are not constant, but may occur almost any where and at any time, and neither do they occur immediately after use of the eyes but considerable time may elapse before the attack, sometimes not appearing until awaking in the morning. The most common place for them to occur is the frontal region, then comes the temporal. The occipital region is not an infrequent location for it, and when I find it there I usually look for some muscular imbalance. The parietal region has been so long monopolized by the gynecologist that I hesitate to suggest that you may find them there, but don't neglect to look for one little headache in this region as due to ocular disturbance as I have now and then found a parietal headache relieved by correcting some ocular disturbance.

There is nothing characteristic about an ocular headache to differentiate it from any other unless it may be in this that it is often a dull pain and relieved by rest of the eyes, yet the pain may be as acute as from any other cause.

If there is no peculiarity to the pain, then how are we to differentiate the ocular and the non-ocular headache? The occupation is often of great service, as for instance that of the school teacher. She comes complaining of headache after school and after use of the eyes, usually not suffering on Sundays. The dress-maker will complain in a similar way, getting relief only when she takes a rest. The pupil in school is like the teacher.

It does not take an oculist to make a diagnosis in this class of cases, and the family physician should send them to him with the proper diagnosis.

In those occupations which do not require the close application of the eyes we must get at it in much the same way. The housewife may have ocular headaches yet she does not use her eyes constantly, but after sewing there is pain and discomfort. Again one can get a very good pointer by asking her if the headache comes on after a shopping tour or sight seeing. These are very leading questions and are almost positive evidence of eye strain when

answered in the affirmative. The patient will often volunteer that information herself.

Another companion question is in relation to lights hurting the eyes and bringing on headaches when the patient is exposed to them.

As to the eyes themselves they rarely call attention to the fact that the headache may be due to some trouble there. Rarely is the vision affected and very frequently it is above normal. Yet at times the eyes smart and burn on close work, at times eye strain is indicated by the eyes aching and a sense of discomfort. When these symptoms accompany headache diagnosis of eye strain becomes a simple matter. Another symptom of eye strain that is very characteristic is that of scales on the lids, this is very common in children yet occurs often in adults. I always consider these cases as needing glasses rather than yellow ointment, which used to be the routine treatment for this condition, as it was called then blepharitis and treated as a disease by itself. When you find this condition accompanying headache don't look farther than the eyes to find the cause of the headache.

Leaving out the headaches due to disease of the eyes, all other ocular headaches have their origin in some astigmatic error or a combination of astigmatism and hypermetropia or myopia. A muscular imbalance may account for a certain per centage of them, though refractive errors are responsible for the greater number. Small degrees of simple hypermetropia or myopia rarely produce disturbances of a reflex character, but very small degrees of astigmatism often produce great annoyance. The severity of the attack does not indicate the degree of error, as often the attack may be all out of proportion to the size of the error. Sometimes we find on working out the error that it is so small that we hesitate in making the diagnosis of ocular origin. Some twelve years ago I read a paper before the Chicago Society of Ophthalmology on the correction of small degrees of astigmatism, and I remember distinctly how several of the older members took exception to it, claiming that it was useless to do so. I have seen those same men change their minds since, and I think I am safe in saying that all Ophthalmologists now admit that small errors must be attended to.

I will give the history of one case and it illustrates not only the relief of headache but the cure of a very aggravated case of bad disposition as well. Mr. R. brought his six year old son to me with the familiar remark "that his family doctor had done all he could to stop his headaches and had advised him to see an oculist." I went over his eyes carefully and found the smallest astigmatic error that I correct, so I was compelled to tell the father that I had doubts about so small an error in so robust a boy could cause so much trouble, and that the only way was to try them as everything else had failed to give him relief. I explained to him that in older children and adults so small an error was the cause of much annoyance, but in small ones it seemed doubtful. I put up the glasses and to our surprise, the headaches disappeared and as I hinted at before another surprise was in store. From being

the meanest and most disagreeable of six brothers and sisters he became the sweetest dispositioned of all. It is evident that we can not ignore even such small errors in children.

The next important ocular reflexes are those that occur in nervous disorders and those in which the eye strain is the cause of the nervous trouble. It is here that the oculist runs up against a hard proposition when he wishes for a sure diagnosis. I hardly think it possible to pick out a set of symptoms and say that they belong to nervous patients, but rather we must fall back on the general proposition that all nervous patients should have their eyes looked after. I am sure every neurologist will agree that before they can successfully treat such cases every source of irritation must be attended to.

Some very serious cases of nervous prostration do not seem to completely recover until the error in the eyes have been corrected. In spite of all the doctor may do they can only get so far on the way to recover and then for some unknown cause they seem to be at a standstill until some one gives them a pair of glasses or readjusts some muscular imbalance.

Usually the oculist gets the patient in the same manner that he gets the headache case. The physician exhausts his resources first and then he decides to try the oculist and frequently the latter has such success that the doctor does not see the patient again. I have a doctor friend who will not attempt the treatment of a nervous case until I have corrected any error that may be found in the eyes. He always tells the patient that they must have glasses if I find a refractive error. Here is a good example of how he sometimes gets served by doing so. He sent a Swede girl to me some time ago to have glasses fitted. I found a thin sickly girl of eighteen, very nervous and coughing so hard that it was annoying trying to fit her. I found a very small error, indeed we correct but one smaller. I put up the glasses and she left seeming quite pleased. Neither the doctor or I saw or heard from her for two years. She then came in to have her glasses repaired, when she informed me that I had cured her of consumption. We have all sorts of cures in Chicago for consumption but this is entirely new and I hope no quacks will get hold of the idea as I want to hold the monopoly of it. When I laughed at her she said: "any way, I was treated for four years by four different doctors for incipient phthisis." She certainly must have had considerable to do with doctors to know the technical name for commencing consumption. She claimed that after she put on the glasses the cough stopped before she arrived home and that it would return on leaving off the glasses any length of time. She commenced to grow fleshy and was as healthy looking as Swede girls usually are. Here was an undoubted case of a purely nervous condition relieved with glasses. Think of it, four years of this young girls life wasted simply because four doctors did not recognize a nervous condition from consumption and only got relief when she fell under the care of

physician who recognizes that nervous disorders often arise from faulty eyes.

I have on my books several cases of nervous dyspepsia cured by putting on glasses. One case was a surprise all around as the patient put on the glasses to relieve a theater headache and some time after she came and asked if I thought the glasses would cure a case of chronic indigestion. Certainly if it was of nervous origin. She said that for years she had been a great sufferer from chronic dyspepsia and that it had disappeared since putting on the glasses. The relief from such nervous manifestations is not an uncommon thing as every oculist can testify. The trouble is to get the family physician to recognize that fact and to have the patient take his advice.

I cannot resist the temptation to give one more example of nervous reflex trouble relieved with glasses. This time it is a case, pure and simple of nervous prostration, and the result is remarkable in two things, showing what may sometimes occur, and the care that must be taken by the oculist in the fitting of glasses. In this case a lot of time was wasted simply because an oculist was not careful in his work as you will discover from the history.

Miss F., 20 years old, had been a sufferer for six years from nervous prostration, trying in every way to get relief with constant failure. The parents finally suspected that the eyes might be at the bottom of her trouble and glasses were tried, prisms strong and weak were added and still no result.

Finally the muscles were tenotomized and another failure recorded and with this array of failures, I should have thought they would have given up the eye theory, but they were firmly convinced that the eyes had much to do with her condition and I was selected to make the next failure. Knowing what had been done by one I considered very competent, I went at the case with a good deal of misgiving. I told them frankly that I did not think I could help her, yet they insisted on my trying. I worked out her refraction and found that the glasses she had been wearing had not been correct, also that the muscular balance was nearly correct. Knowing that sometimes a very small error of refraction often causes severe nervous trouble I told them that possibly that was the secret of the other man's failure. I put up for her the glasses and to our surprise she commenced to improve at once and at the end of two months was able to go east and spend the summer by herself. The error made before was very small yet it was the cause of the previous failures to give relief and it is a good example of how nervous people are seriously affected by little things. In all such cases the utmost pains should be taken in correcting any error of refraction.

Taking many of the other reflex troubles that one may meet with that possibly might have their origin in the eyes, you may be compelled to make your diagnosis by exclusion of other causes. Or you may try the correction of any error found to be present. Take a case of epilepsy in a child, you should always try the correction no matter how small it may be. A small lad was brought to my office who had

as high as eight fits a day, having one while in my office. The instillation of atropine stopped them at once and the correction of a small error of refraction gave him so much relief that he had no more for eleven weeks. Then they returned occasionally when they found another reflex trouble which was corrected and I understand he has been completely relieved. In all such cases no positive diagnosis can be made beforehand, but one must try to relieve in all possible ways by correcting every possible reflex. It would be a very trying matter to make a diagnosis in nervous dyspepsia, so one must treat it empirically looking constantly for the offending reflex cause. I usually find such patients in a very receptive mood and willing to try anything that will hold out the least hope of relief.

There are other troubles of an obscure origin that are relieved by hunting out some external irritation and relieving it. I remember one case of severe car sickness that was relieved by the use of glasses and which returns now ten years afterwards when the glasses are left off.

The care of these reflex cases require the correction of errors of refraction and muscular imbalance in the most careful manner possible. A well equipped oculist has trouble enough in giving such patients relief and they should not be turned over to the jeweler and optician to have glasses fitted if for no other reason than that they may have a muscular trouble which they are certainly incompetent to handle. The oculist can not always be positive of his diagnosis, how much less the optician who has spent a couple of weeks in some one of our jeweler teaching schools.

70 State Street, Chicago, Ill.

 (A) Adams County Medical Society.
 (A) *****

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President W. W. Williams, Quincy
 First Vice Pres. A. D. Bates, Camp Point
 Second Vice Pres. Henry Hart, Quincy
 Secretary John A. Koch, Quincy
 Treasurer L. H. A. Nickerson, Quincy
 Censors: Jos. Robbins, Quincy; C. D. Center, Quincy; R. J. Christie, Jr., Quincy.
 Delegate to State Society, E. B. Montgomery, Quincy.

The regular monthly meeting was called to order by President Williams. The following members were present: Drs. Ashton, Byers, Center, Christie, Jr., Gilliland, Hart, Knox, E. B. Montgomery, Nickerson, Pfeiffer, Robbins, Rosenthal, Sigsbee, Tull, Vasey, J. G. Williams, W. W. Williams and J. A. Koch.

The committees on necrology handed in their reports on the deaths of Dr. W. M. Landon, Dr. Virgil McDavitt and Dr. W. M. Cox.

IN MEMORIAM.

Dr. W. M. Landon.

He was born at Williamsport, Ohio, November 13, 1827, where he received his common school education. His medical education began by reading medicine with Dr. Parsons, of

Quincy, Ill. Later he attended lectures and graduated from the Cincinnati College of Medicine and Surgery in 1863.

He located at Payson, Adams Co., Ill., where he practiced his profession for a short time, later removing to Burton. There he resided and practiced for thirty years. Dr. Landon spent the last few years in Quincy, where he died September 11, 1903. He became a member of Adams County Medical Society in 1856.

Dr. Landon, throughout his long professional career, was ever faithful, conscientious and devoted to his cause.

R. J. Christie, Jr.
Sarah Vasen,
H. Hart.

Dr. Virgil McDavitt.

He was born April 30, 1829, in Warren Co., Ky., where he received his early education. In 1850, he graduated in medicine from the Louisville College of Medicine. The next three years were spent at Houston Township, Adams Co., where he practiced his profession. In 1854 he attended a post graduate term at Pope's Medical College in St. Louis, Mo. A year he was appointed assistant physician to the city hospital.

In 1862 he was commissioned surgeon in the First Alabama Cavalry, where he served two years. In 1864 he located at Macomb, Ill., remaining there 18 years. In 1881, he removed to Quincy, at which place he continued the practice of his profession until his death, October 2, 1903.

He became a member of Adams County Medical Society in May, 1856, remaining same until 1890; upon the adoption of new constitution, resumed his membership in January, 1903.

Dr. McDavitt was a good citizen, a true gentleman and an upright man.

R. J. Christie, Jr.,
Sarah Vasen,
H. Hart.

Dr. W. M. Cox.

A native of Morgan County, Illinois. Graduated by the Medical Department of the University of Iowa, in 1860 at 22 years of age, and began practice at Bloomfield in that state. On the breaking out of the Civil war he was appointed surgeon of the Third Iowa Cavalry, but was soon compelled to resign on account of severe illness.

Located at Liberty, Adams County, Illinois, in 1862, where he practiced until 1877, when he removed to Mt. Sterling, where he continued in active practice until disabled by his final illness. Married in 1875 to Miss Effie Morris, of near Payson. The fruit of this union was one daughter, now Mrs. C. E. Walker, of Mt. Sterling.

Dr. Cox became a member of this Society in 1877.

Dr. Cox was devoted to his profession, a close student, industrious, public spirited, charitable, and leaves behind him the record of a stainless life.

Joseph Robbins.
W. E. Gilliland,
J. N. Black,

Committee.

Tribute to Dr. Cox.

When it pleased Almighty God to take to Himself, on Monday morning, September 14, the soul of Dr. William M. Cox the world was left poorer and heaven richer by the transfer. Born in Morgan county, Illinois, in 1838, his life in sixty-five years was spent from his boyhood in personal effort to do and to be all his high ideal of manly nobleness demanded. He was my brother-in-law and I knew him well and thoroughly understood him, and can therefore say he did not fail in attaining the character he so strenuously strove for. His was a clean life, an honorable life; no stain was on his escutcheon, and neither envy nor malice hinted at a flaw in his reputation for old-fashioned honor, truthfulness and honesty. You could always believe what he said and be sure he would do what he promised. Pure minded, sincere, and generous to a fault, he loved, and was beloved by all similar dispositioned people. To his intimate friends and relatives his presence and kindly words of cheer were always a tower of strength and in trouble a benediction. His domestic life was delightfully beautiful, so ideal that it is almost profanation to expose it to publicity, but it has left behind it a memory so precious that it is a powerful consolation in our present supreme grief and misery. Death cannot rob us of the priceless memory of the happy days that, alas, are now no more. We remember him as the kind father, the affectionate husband, the loving relative and the true friend, and shall ever so remember him.

He was fortunate in the selection of his profession, and his rare ability, incessant application and experience made him more than ordinarily successful and his death will be a loss to the medical fraternity. He was ever desirous of being thoroughly informed in the advanced theories of his profession and therefore not only took post-graduate courses at the best institution in New York City, but endeavored by reading much to keep abreast of the best thought of the day, being a member of the American Medical Association, the State Medical Association and the Adams County Medical Association. And in a large measure he succeeded. The main part of his practice was at Liberty, Ill., and his success was almost phenomenal. There his reputation was fully established, his name became a household word in the vicinity, and his memory is still precious to all who knew him. Truly, in this also, his works do follow him.

He was twice married; first to Miss Alice Choate, of Hancock county, and then to Miss Effie Morris, his widow, whom may God bless and comfort. One daughter, Mrs. Charles E. Walker, was born to bless them and happily she remains to comfort her mother. A brother and sister, Dr. G. W. Cox, of Clayton and Mrs. H. R. Trickett, of Macon, Mo., also survive. I cannot tell in words how happy he was in his married life. No clouds hung over that happy household. The fragrance of the perfume of their mutual love made their home as blessed and sacred as a sanctuary. Would to God there were more such happy homes in this dreary world of desolation, discord and misery.

Religiously I dissented from him in some

minor things, but I had no doubt at all that he was one of the elect of God, and that I shall in a short time meet and greet him in the presence of the great King of us all. His wonderful conscientiousness made it impossible for him to be anything but honest and sincere in all that he believed and did, and when we are judged it will be not what we pretend to be but what we really were that will settle our destiny.

Many other things I might say about him, such as his relation to the Masonic, medical and other organizations, but I wish simply to utter my tribute to the memory of one of the best men I ever knew and whose life we may well try to imitate, for it was a beautiful, full orb, consistent life. I thank God it was my privilege to know him, and now he has left us all I can do to honor his memory is to write this feeble "In Memoriam" as a slight evidence of my love and esteem for him.

H. R. Trickett.

The secretary read a letter of resignation from Dr. R. J. Christie, Sr., as honorary member. The reason given was that "the Society seems to tolerate without an effort to prevent it, gross and flagrant violations of ethics in the matter of sneak advertising and reporting cases through the daily papers almost daily." Dr. W. E. Gilliland moved that the letter be accepted and placed on file; seconded by Dr. Jos. Robins; carried.

The Board of Censors recommended Dr. Wm. J. F. Reiffert, of Quincy for membership, and by a unanimous vote Dr. Reiffert was elected.

Dr. E. B. Montgomery read a

Report of Epidemic of Pneumonia in the Aged.

My excuse for this short and incomplete report is twofold. First, that I desired to present it at this time when the season for Pneumonia is approaching: Second, because the experience having been, as I believe, a valuable one to us, this incomplete relating of it may be so to you. At all events, I give it and you take it for what you may think it worth. In February, 1902, on account of the very large mortality prevailing from various causes of which Pneumonia was a large contributor, I was called by General Black, then President of the Board of Trustees of the Illinois Soldiers' and Sailors' Home, now Commander-in-Chief of the Grand Army of the Republic, and Capt. Somerville to act as the consulting surgeon for that institution. This, with the consent of the surgeon-in-charge, Dr. D. M. Landon; I did and continued to do this until May of the same year. A comparatively large number of cases of Pneumonia occurred and the result of treatment, I desire to give them to you with some opinions of mine on the treatment of this disease. All authorities agree as to the extreme fatality of this disease in those of from 60 to 70 years of age, Osler giving it as over 50 per cent, while all regard the prognosis as unfavorable, it being the disease which furnishes the largest number of fatalities at this period of life. In this epidemic at the Home 17 cases came

under my observation, the diagnosis in each case being verified by one or more of my colleagues at the Home. Of these cases the right lung was involved in 12 cases, the left in 7 while in one case both lungs were involved. Three of the cases occurred in those giving a marked history of alcoholism, and all of them died, furnishing in fact three-fifths of the mortality, and the remaining three were over 70 years of age and debilitated. The remaining 11 made good but rather slow recoveries, a fact that I have observed in Pneumonias in the aged in private practice. Of three cases seen in private practice during the same year, aged 72, 65 and 58 respectively, two of them having been seen with me by other physicians, all recovered. So that in these 20 cases with an average of 64.5 years, there was a mortality of six or thirty per cent which is considerably under the average given in the books, or under that of my earlier experience. In the treatment the nursing is of course of primary importance, both for the supplying of water and liquid nourishment as required save the patient's strength to apply the medication regularly and as indicated. A saline purge at first and throughout the illness as indicated is of importance, and as a febrifuge the old liquor ammoniac acetatis freshly made and in tablespoonful doses at hourly intervals is useful. For the pain and any accompanying pleurisy, salicylic acid in the form of either potassium salicylate or Aspirin in 10 gr. doses every 3 or 4 hours is very useful. My experience is that opium or its alkaloids are distinctly harmful, and are not necessary for the control of pain or cough. The drug which has seemed to me to be of the greatest importance and which should be used from the beginning to the end of the illness, if it can be tolerated as it usually can be, is the Beechwood oil of creasote which seems to me quite as valuable a drug here as it is in pulmonary tuberculosis. It is best given in 1 to 2 minim doses in a tablespoonful of Sherry wine or other vehicle every 3 or 4 hours. For a weak or failing heart Strychnia hypodermically in 1-30 gr. doses as required is often life-saving. Locally the Kaolin and Glycerin paste, put up under various proprietary names has seemed to me to afford some relief. The salicylates are most useful not only in allaying inflammation of the pleura, but in promoting the disappearance of any pleuritic effusion that may occur. The diet should be liquid consisting of milk, soft eggs, and animal broths and should be given in small quantities at intervals of 2 hours. My experience is that with such a treatment we can succeed in saving not only nearly all the uncomplicated cases in the young, but a larger proportion of those occurring, in temperate subjects without diseases of the kidneys, in the aged.

A discussion followed on the treatment of Pneumonia.

Dr. R. J. Christie, Jr., reported a case in which he used, with success, "cargyle membrane."

Adjournment.

Peoria City Medical Society.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 70.

Officers.

President L. A. McFadden
First Vice President J. C. Roberts
Second Vice President B. M. Stephenson
Treasurer Jeanette Wallace
Secretary S. M. Miller
Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.

The Peoria City Medical Society convened in the Observatory building, at 8 p. m., on Tuesday evening, December 1, 1903. The President, Dr. L. A. McFadden, occupied the chair.

Dr. Whitten: The Sanitarium Treatment of Tuberculosis.

There are many potent arguments in favor of the sanitarium treatment as the solution of the tuberculosis problem on the part of the State. It removes the individual from an environment where he is a constant focus for the distribution of infection. It educates him to the nature of his malady, and the sanitary precautions necessary, in order to avoid contracting or spreading the disease, and every cured patient becomes an exponent of the success of the sanitarium, and he will in turn aid in the education of his fellows. It makes sure of a proper hygienic and dietetic regime, which are the important factors in treatment.

This is a state problem. While many will be cared for in private institutions and at home, the great burden of caring for the tubercular subject will fall upon the state.

Many objections however are urged against the sanitarium as a State institution. These are mostly maintained by politicians and on the part of the State legislatures, and for the most part relate to lack of funds. Yet the loss of 8,000 lives annually in Illinois from tuberculosis is far greater economic loss than the expense of establishing and maintaining sanitariums, not considering it from a humanitarian standpoint.

Another favorite argument often urged against the sanitarium treatment for the poor, is that a compulsory attendance in a sanitarium is an encroachment upon personal liberty, yet the State deems it a good public policy to protect its numbers against other scourges by isolation, such as small pox, yellow fever, etc. That hospitals act as foci for the spread of the disease is also refuted by the testimony of the institutions already established, where under sanitary regulations tuberculosis rarely develops among the attendants.

As regards the location of a sanitarium. It is better of course to have the aid of climatic advantages, but this is not possible nor essential, as the favorable records of institutions in unfavorable climatic situations testify. Preferably, the sanitariums should be close to the large cities, that furnish the greatest number of cases. A farm should be associated with the institution, for farm life is desirable for most cases.

Dr. Roskoten: Climatology in Treatment of Tuberculosis.

Fourteen per cent of all persons die of tuberculosis. The mortality of those affected is 28 per cent, 72 per cent of all who contract the disease recovering. Many of the cases that recover are not diagnosed, passing as grip, colds, etc., and these cases have recovered mostly by the unaided efforts of nature. Therefore it is evident that a powerful curative influence is often spontaneously exerted.

Tuberculosis is not commonly a disease of violent activity. Its progress is insidious, causing no violent reaction. It paves the way for mixed secondary infections, and the patient begins to lose ground rapidly under the burden of double infection.

The tubercle bacillus is not a vigorous organism, and theoretically it should not be difficult to eradicate the disease.

The weak and debilitated easily contract it. Present day methods of living; crowding, concentration of humanity in small areas, lack of fresh air and exercise, excesses and frequent exposure to infection are potent factors in causing the disease. The robust do not succumb to it. Out door life and freedom from crowding and excesses tend to increase constitutional vigor and resistance, and under such conditions, tuberculosis is less prevalent. The keynote of success lies in early recognition and in prompt hygienic reform.

Ocean and small island climates vary with latitude, prevailing winds and currents, etc. The great bulk of water gathers heat in summer and radiates it, as cold weather approaches, and the wind carries the heat and moisture long distances, the air overhead is very moist; equability and humidity are the dominant features. The air is the purest, barometric pressure is high. Rainfall and fogs are frequent. If hot, the excessive humidity renders the air depressing.

Land climates vary first according to distance from the seashore, where they are more equable, and more humid. Near the sea coast they are modified by ocean-currents. The Gulf stream flows northeast across the Atlantic ocean warming England and the coast of Europe, while a cold polar current from the north precipitates the moisture on the New Foundland banks, causing the dreaded fogs. On the west, the Japan current flowing northeast renders the western coast of North America mild even as far as the southern part of Alaska. A cold current from Behring Sea strikes the California coast till a sudden change in the contour of the coast at Point Conception allows the current to pass away from the land, changing the rainy climate of the middle California coast, to the milder climate of the Santa Barbara coast resorts.

Another factor in modifying the climate of our western coast is the trade winds; between 30 degrees north and 30 degrees south latitude the trade winds blow from the east. Beyond these limits, the direction is reversed. The western progress of these winds is barred in northern Mexico and on the peninsula of lower California by high mountain ranges, west of which the coast is dry, sandy, and little vegetation exists, except south of the 23d parallel, where a lessened elevation allows the eastern

winds to pass and supply moisture to the coast, which consequently is fertile and well watered.

Very different from lower California is the climate of the west coast of the United States, over which the west winds blow from the Pacific till blocked by the Sierra Nevadas on whose western slopes they deposit their moisture as fog and rain. The precipitation increases northward as the influence of the Japan current is felt. On passing over these mountains, the winds lose both heat and moisture, and on reaching the elevated plateau of the Rocky mountains, they become very dry. The land east of these ranges is consequently dry, and naturally sandy and there is much sunshine. The Mississippi Valley would be likewise dry if deflection of part of the Gulf trade winds did not carry moisture to the central basin.

Coast climates are moist even if there is little actual rainfall. Even in reputed dry regions, as in southern California, heavy dews and fogs are common. These occur mostly at night when the temperature falls till the point of saturation is passed and the moisture precipitates. For example, at Santa Barbara, there are, on the average, 73 foggy nights yearly. This fact should be more generally appreciated, for invalids in these climates must be carefully protected from the chilling effects of these fogs.

Inland climates are subject to great variations between summer and winter, but the degree of heat or cold actually felt varies with the humidity of the air. In the Dakotas, and in Canada, where the air is very dry, little discomfort is felt in cold weather. In fact the air is invigorating. But in localities where it is damp, and only moderately cold, there is acute suffering, because the moisture aids in the radiation of heat. Air at freezing point holds little moisture, about half a grain to the cubic foot while at 80 degrees F., it will hold over twenty times as much. A really cold air can hold little moisture. If such an atmosphere is warmed by sunshine it expands and becomes extremely dry, and a very poor conductor of heat in winter, and a ready absorber of moisture and perspiration in summer, so aiding evaporation, a cooling process. If the air is hot and humid, as in the Gulf states in summer, the heat is more oppressive. The perspiration cannot evaporate into an already saturated atmosphere. Hence the difference between 90 degrees at El Paso and at New York.

Altitude. If the elevation is considerably more than 5,000 feet, and removed from the seaboard, so that the wind, blown over long stretches is reduced in humidity by precipitation as fogs and rain, such rarified dry air is very diathermanous. The sun shines through with great brilliancy. The sunshine is hot, but the shade is cool, since the air is little heated. In such an atmosphere there are many sunshiny days and little rain and patients can be out of doors almost daily. Mountain sickness is the result of disproportion between pressure outside and inside of the body, rather than to the lessened oxygen supply. An air hunger does however result from lessened oxygen pressure. Compensation occurs through

1. Increase of red blood corpuscles,
2. Increase of expansion capacity of chest,

3. Hypertrophy of heart and increased rapidity of circulation, and increased cell changes throughout the body.

Tuberculosis is rare in all high altitudes throughout the world.

Unfortunately, many resorts are not of this class, being below the 3,000 foot level, and rather moist. Some excel for relative purity of air. Mountain and forest resorts of this class are those of the Alleghenies, Adirondacks, White Mountains and Ozarks. Those of South Carolina and North Carolina, notably Asheville, owe to their mild winter climate, pure water and dry soil, and freedom from high winds their popularity.

Desert climates are to be found in two locations. The Mojave desert of southern California and the great Colorado desert in the southern part of the state, the rainfall in some parts being as low as 2½ inches annually. It is intensely hot and sandy.

The Rocky Mountain resort region comprises the block of four states, Colorado, Utah, New Mexico and Arizona, forming a vast plateau of an elevation of 5,000 feet and upwards as the Rockies are approached. It is very dry, and cool in the northern parts, where the difference between shade temperature and sun temperature may be from 40 degrees to 60 degrees. Patients can remain out of doors as night approaches without risk of exposure, as no dew precipitates.

The northern part, Colorado, offers a dry equable bracing climate of the right elevation. In the southern portion, New Mexico and Arizona, the winters are mild and afford excellent climates, but the summers are intensely hot. Toward the west notably Utah, it is a little moister and more variable, by reason of its receiving the moisture of the western Pacific winds. In New Mexico the upper Pecos Valley furnishes perhaps the most ideal climate having a winter climate of 41 degrees, seldom below freezing point; summer average 77 degrees. Here we have the ideal climate, elevation, dryness; maximum of sunshine and equability.

Southern California differs mainly in the increased humidity of the air. The desired altitude may be obtained as one departs from the coast into the interior. It is foggy at night and not so desirable on the whole for tubercular patients.

Regular session of the Peoria City Medical Society on Tuesday evening, January 5, 1904, in the Observatory building. The president, Dr. P. O. McFadden, was in the chair. Dr. R. L. Green reported a case of **Recurrent Sarcoma of the Inferior Maxilla Treated by the X-Ray.**

Sarcoma: The X-Rays Therapeutic Agent.

After considering the pathology of Sarcoma the paper gives detail of case of epulis.

The case was a female age 37, proven to be large spindle cell sarcoma which had been removed and base cauterized. It returned in four months and X-Ray treatment commenced. Treatments given once in four days sometimes seven for nine months. First three treatments relieved patient. She has been apparently well

for six months and has gained fifteen pounds. Her mother died of cancer of the stomach.

After study of twenty-five cases reported by Drs. Pusey, Caldwell, Coley, Beck and Williams it was shown that early prompt surgical treatment followed with careful use of X-Ray yielded the best results. But great benefit can be had in the inoperable cases.

It is believed that the method will not be perfected until we have a means of measuring the rays. Then a comparison of cases will be of more benefit. Differences in tubes, machines and even the same apparatus in different hands give a vastly different amount of ray.

Discussion.

Dr. Sutton: Surgical treatment of sarcoma of the neck is discouraging, and in the face it is in addition disfiguring. Anything that will help this class of cases is to be welcomed. I believe that the X-Ray holds the promise of accomplishing much here. It should be routine practice to follow operations by treatment with the X-Ray. I reported at our last meeting a case of carcinoma of the pancreas found to be inoperable, when exposed by an exploratory incision. The tumor mass was sutured into the abdominal wound, and exposed to the X-Ray. The mass steadily diminished in size, and finally disappeared.

Recently, the development of lung findings has led us to suspect metastases in the lung. Not long since we removed an epithelioma of the lip, which had grown rapidly, while X-Ray treatment had been used. The tissues were hard, like scar tissue, much indurated on removing the stitches the wound opened throughout its entire length. We attributed this to the effect of the X-Ray.

R. A. Kerr: I have used the X-Ray in one case of sarcoma. It had been operated upon four times, the last time by myself. One year after the last operation it recurred in the operation site and appeared as a mass in the neck posteriorly, just below the occiput. It was covered by dilated veins, and was ulcerated over the center. This mass diminished under X-Ray treatment, finally disappearing. Twenty-six exposures in all were given. During the first week, daily; during the second, three times, and thereafter two exposures each week.

After one and one-half years it again recurred, as a very vascular growth with a second mass, just below and in front of the primary growth. This was probably a metastasis in a cervical gland. The X-Ray was again used and the two masses disappeared. The microscopic examination showed it to be a small round cell sarcoma.

R. A. Kerr reported a case of **Carcinoma of the Stomach**, in which the pylorus and four-fifths of the stomach was resected.

A woman, age 65, suffered from gastric symptoms for eighteen months, which consisted of sharp pains in the stomach, worse on taking food, anorexia, feeling of fullness and distention. Loss of weight, fifty pounds. Dr. Kerr

examined her in August, 1903, and found an elongated mass larger than a clinched fist in the hypochondrium. It was freely movable. The diagnosis of carcinoma of the stomach was made in consideration of the clinical history. The location rather farther than usual to the left, suggested its origin from the greater curvature. The woman was in good physical condition and the free mobility of the mass encouraged an operative procedure.

Operation, September 11, 1903, by one incision to the left of the median line, exposing the mass, which was easily brought into the incision and found to be a carcinoma involving the entire circumference of the stomach, and extending from the pylorus to involve over half of the stomach. The great omentum was reflected over it and adherent anteriorly. This was severed between ligatures at a distance of about one inch from the tumor mass. The gastro-colic omentum was next ligated in sections. Then the gastro-hepatic omentum, and the mass was freed in all directions. Palpation of the lesser cul-de-sac and retro mesenteric region failed to show metastases.

The duodenum was next severed well beyond the growth, and the mass removed by severing it at the cardiac extremity, and about one-fifth of the stomach at its cardiac extremity remained. The duodenum was united to this with a Murphy button at the lower angle of the wound. The upper part of the gap in the cardiac end being closed. The junction was drained with gauze for three days. The button passed on the thirty-first day, and the patient has gained in strength and weight steadily.

Specimen is a cylindrical mass about 10cm. in length by 4 to 5 in diameter. The lumen will barely allow the passage of a lead pencil.

Sangamon County Medical Society.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m.
Membership 73.

Officers.

President B. B. Griffith, Springfield
Vice President S. E. Munson, Springfield
Secretary-Treasurer C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The Society held its regular monthly meeting, January 11, 1904, in the Supervisor's Room, at the Court House. The meeting was called to order by President B. B. Griffith, at 9:15 p. m., with eleven members present.

Minutes of last meeting read and approved.

The Board of Censors found the report of the retiring secretary-treasurer correct, and the Society voted it be accepted and inserted in the minutes as follows:

I hereby submit my report as secretary-treasurer for the year ending November 9, 1903. The Society has lost by removal, deaths or failure to pay dues, 16 members; 9 have been elected to membership, making 60 in good standing.

Average attendance at 11 meetings was 14.
Number of papers read and discussed 16.

Financial Report.

Balance in hand Nov. 11, 1902.....\$ 84 77
Amount of dues collected to Nov. 9, '03.. 148 00

\$232 77

Amount of expenses per orders 227 70

Balance on hand Nov. 9, 1903 \$5 07

Percy L. Taylor, Secretary-Treasurer.

Dr. H. H. Tuttle was elected to membership. The names of those in arrears were read, and the secretary was instructed to get out a circular notifying members in arrears for one year; that when in arrears for two years, their names were dropped from the list of the County Society, which also dropped them from the State Society.

Bills of Ed. F. Hartmann Co., \$1.25; Secretary, \$2.65, were read and ordered paid.

S. R. Hopkins read a very interesting paper on **Foreign Bodies in the Abdomen**, which was afterward discussed by members present.

Adjourned.

At the meeting of December 14, 1903, the Hon. James M. Graham delivered an address on **Medical Jurisprudence**.

Medical jurisprudence is of quite ancient origin. The old Jewish law recognized a distinction in the nature of different wounds, which required the judgment of persons skilled in such matters; the ancient Egyptian laws forbade the infliction of physical punishment on any pregnant woman, and ascertained through experts whether the condition of the woman was such as to exempt her from such punishment; the ancient Greeks had advanced ideas on the subject, and the Romans, the greatest of all lawgivers, gave much weight and attention to the opinions of physicians in the administration of the law.

We read that one Antistius—I suppose it would be proper to say Doctor Antistius—publicly examined the dead body of Julius Caesar, and declared as the result of his examination that only one of twenty-three wounds inflicted on his body by the senatorial conspirators, was necessarily fatal.

Ordinarily one mortal wound is enough, and so it proved to be in Caesar's case.

But while the ancients recognized the necessity for the aid of medical experts in the administration of justice, their theories of medicine were so imperfect; their knowledge of the organization of the human body so limited and their views of the functions of the various organs so erroneous, that they were merely groping in the dark, and indeed that continued to be true for the first 14 or 15 centuries of the Christian era.

About the beginning of the sixteenth century the subject of forensic medicine began to assume form and shape. In 1532 for the first time, a public law was promulgated by the Emperor Charles V of Germany, to the effect that in all cases of death by violence the opinions of medical men should be formally taken as to the

cause of death. This enactment might be called the real beginning of the science of medical jurisprudence.

Four years later, in 1536, Henry II of France, made the concealment of pregnancy and the destroying of the child a felony, punishable by death.

In 1606, Henry IV, King of France, known in history as "Henry of Navarre," gave the first physician of his household a Royal patent authorizing him to name and appoint two surgeons in each city or town of importance in his kingdom, whose duty it was to examine all wounded or murdered persons, and report the result of their examination to the authorities.

In 1667, Louis XIV of France, formally declared that no such report should be valid without the indorsement of at least one of these surgeons, and in 1692 physicians were by law associated with these surgeons in making the necessary examinations and reports.

These laws, and the trend of affairs which they indicate, gave a stimulus to writers on the subject of legal medicine, and what is probably the earliest work published on the subject, appeared in 1598 at Palermo, Italy. As the value and importance of medical aid in the administration of the law became more and more apparent, books on the subject multiplied with great rapidity, and the multiplication is still going on.

There are very few other fields of inquiry into which the human mind has entered wider than the field of medical jurisprudence. At some point or other it touches elbows with almost every subject concerning mundane affairs. It involves a knowledge of the principles of the law, civil and criminal; of medicine; of surgery; of chemistry; of physics and mechanics, and the aid which it renders the bench and bar in the administration of the law is well nigh incalculable. The subject includes not alone the relations of the citizens to his fellows during life, but includes antenatal and postmortem matters as well. It deals with the individual, as it were, before he is born, during his entire life, and continues to deal with his affairs after he has passed away. It has a direct and important bearing on his property rights while he is living, as well as with the distribution of any property he may leave after his death.

I shall confine myself tonight to a brief review of the subject, first, from the point of view of the doctor as a witness; and second, from the standpoint of the doctor as a defendant.

In every law suit there are two constituent elements namely the facts and the law. Of these the facts are usually more difficult of ascertainment than the law. It is not very difficult to apply the law to an ascertained state of facts. The testimony of witnesses is one of the principal means for ascertaining what the facts are.

Witnesses may testify as to facts which they saw or heard, facts which they observed in the usual way; or they may give, they may testify as to their opinions drawn from facts described by those who observed them. The former would be ordinary witnesses, the latter experts. An expert has been defined to be "one who is skilled in any particular art, trade or profession, being

possessed of peculiar knowledge concerning the same."

Witnesses are notified to come into court by a writ called a "subpoena," i. e., under penalty, and a failure or refusal to obey this writ places the party in contempt of court for which contempt the penalty may be enforced against him.

A physician, like any other witness, is bound to appear in answer to the subpoena, whether it be as an ordinary witness to facts which he saw or heard or observed, or as an expert concerning some matter on which he has special knowledge and which non-expert evidence in the case has made relevant, and more or less important.

In such case the law requires him in the interest of public justice to give the court the benefit of his opinion on such state of facts as the non-expert evidence tends to prove. Expert evidence is by no means confined to physicians.

We frequently have expert witnesses in trials involving questions of handwriting, explosions in mines, and the gases which cause them, electrical appliances, mechanical contrivances and very many other subjects as well as medicine and surgery. Indeed modern life is developing almost innumerable specialties, and, the specialist is an expert.

The question as to whether an expert witness is entitled to extra compensation has been a much mooted one among professional men and more particularly among the physicians, as they are called as expert witnesses oftener than persons in other professions or calling, as a great many suits grow out of injuries to the person, or involve a state of body or mind which comes within the physicians field. A few years ago, however, it was permanently settled in this State in the case of *Dr. J. N. Dixon vs. People*, reported in 168 Ill., 179, which case, as I was then states attorney it became my duty to prosecute, our Supreme Court holding that an expert witness is not entitled to any greater compensation than any other witness.

The theory of the opinion briefly stated is that every citizen is interested in the speedy and proper administration of justice and that all must be ready to make some sacrifice to that end.

The allowance paid to witnesses generally by the State is not by way of compensation, nor is it in any proper sense pay for their time, but is merely an allowance intended to cover the cost of travel and expenses while attending court.

According to the Common Law of England, which as you are aware, was adopted in this country so far as it was applicable and is still followed largely, a witness was not bound to attend court until tendered his fees "according to his countenance and calling" which interpreted meant according to his rank in society. Under this rule a Duke would probably have to be tendered the cost of a fine equipage with outriders and a retinue of retainers, while a Lord could get along with a Squire or two, and a laborer would doubtless have to walk. This would be in conformity with "their countenance and calling." But in this country we have no legal classification of citizens into different ranks or grades, and so the law fixes an arbitrary sum as necessary expenses for attending

court, which sum is paid to each alike. It is the same with jury service. The juror who at his ordinary occupation earns only \$1.00 a day is paid as much as the juror who in the stock exchange or the bank or the office might earn \$100 a day. Theoretically the amount paid, viz., 10 cents for each mile of travel and \$2.00 per day during his term of service, is intended for expense money rather than compensation.

But the court can require of an expert only such answers as he can give without special preparation.

He cannot be required to take one step, or spend one moment in making any special inquiry or special examination in order to testify.

The question he can be compelled to answer must be a purely hypothetical one. He can not be required or compelled to make any examination whatever to enable him to answer it. The question itself must contain all the elements necessary to enable him to give his answer. In the *Dixon* case the question asked the doctor was as follows:

"Suppose a patient, a woman forty-five years of age who has been married 17 years, had one child twelve years ago and a miscarriage ten years ago, never pregnant since, living with her husband all the time, doing her own work as a housewife, enjoying perfect health, should when walking at a moderate gait trip on a sidewalk by reason of the end of a board tipping up, and should thereupon fall forward on her hands and knees, with such force as to make a slight abrasion on her knee and felt no other immediate injury, but in two or three days thereafter should claim that she had falling of the womb, and that her breast, stomach and spine had been injured by reason of said fall, what would you say as to such injuries being the probable result of such fall?"

This question the doctor refused to answer on the ground that he was entitled to extra compensation as an expert and had not been given or promised any such compensation.

The question, it will be seen, was purely hypothetical, giving all the facts necessary for the expert witness to base his conclusion or opinion on.

As I have said, if any act is required to be done by the physician to enable him to testify, the court has no power whatever to require him to perform such act, and the opinion in the *Dixon* case says that if the question asked of him was one intended to get his professional knowledge for the benefit of the injured person, as for instance getting him to prescribe for her or say what would be a proper prescription for her, he would not be compelled to answer without compensation.

Some States have statutes providing for additional pay for expert witnesses, but in the absence of such statutes the rule laid down in the *Dixon* case is now, I believe, followed in every State.

The question as to whether a physician may be compelled to testify as to conversations with his patient about the patient's condition is not without interest. In law such matters are referred to as "privileged communications," i. e.,

the party receiving them is privileged from testifying about them.

In Illinois communications made by the patient to the physician are not privileged communications, and the doctor may be compelled to repeat conversations between him and his patient, when those conversations become relevant or material in a case on trial. Such was the Common Law Rule, and Illinois has clung more closely to the common law rules, in many respects, than any other state in the Union. Many of the states have abandoned the common law rule and have adopted statutes, making communications from the patient to the physician confidential, and in these states of course such communications are privileged and can be testified to only with the consent of the patient. Arizona, Arkansas, California, Dakota, Idaho, Indiana, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New York, Oregon, Wisconsin, Wyoming and Washington have such statutory provisions, but up to this time Illinois has not. It would appear to me a very proper subject for agitation by your society, as the relations between doctor and patient are often of a confidential nature.

It can readily be seen that this is a very important matter, as in many law suits the patient's condition as disclosed by himself to his physician in absolute confidence might be very material. This would be especially true in Life Insurance cases, and some others which will occur to you.

Where the communication was originally privileged it continues to be so even after the death of the party making it.

In the case of *Westover vs. Aetna Life Insurance Company*, 99 N. Y., 56, the highest court of that state says:

"The practice of the laws would be thwarted and the policy intended to be promoted thereby would be defeated if death removed the seal of secrecy. Whenever the evidence comes within the purview of the statutes it is absolutely prohibited and may be objected to by any one unless it be waived by the person for whose benefit and protection the statutes were enacted. After one has gone to his grave, the living are not permitted to impair his fame and disgrace his memory by dragging to the light communications and disclosures made under the seal of the statutes."

It might be added that even in the states where such communications are privileged, the privilege does not apply to communications made for an unlawful or a criminal purpose. And now, as to the other branch of the subject, namely, "The doctor as a Defendant."

In order to get a better understanding of the matter, it might be well to say that the relation which exists between the physician and his patient is in its nature contractual. This relation may be an express contract, but it is oftener, at least partly, implied. These implied contracts growing out of the relationship between the doctor and his patient are presumed to exist for the purpose of enforcing legal duties from the one to the other where no express contract exists.

When a physician hangs out his sign he invites the public to consult him professionally, and by so doing he guarantees to the public

that he is reasonably competent and capable, and that if employed he will exercise reasonable care and diligence in treating his patient. If he fail in any of these respects, and because of such failure the patient is injured, a right of action accrues to the patient thereby.

This relation of the doctor to the public is only in his capacity as one who holds himself out to the public either by his business sign or otherwise as a practicing physician. If he does not practice his profession, the mere fact that he is an M. D. imposes on him no additional obligations. But if one holding himself out to the public as a practicing physician is called upon to attend a patient and he accepts the call, the law at once implies a contract between him and the patient, and presumes that he is reasonably skillful and reasonably careful, and that he will treat the patient with reasonable skill, care and diligence. If he fail in any of these respects, he thereby becomes liable in damages for injuries which the patient may sustain in consequence of such failure.

It is some times said, and many people have the impression, that a doctor is bound to attend a call to a patient. That is a mistake. It is only when the doctor consents to attend the patient that the law implies a contract between the parties. A physician is never bound to accept a case or to professionally attend any one unless he wants to do so. He has the right to accept or refuse the employment as he sees fit.

The case of *Hurley, admr. of Charlotte M. Burk, vs. Eddingfield*, passed upon by the Supreme Court of Indiana in April, 1901, and reported in the 53 L. R. A., page 135, presents perhaps as strong a case as could be imagined on this point. The defendant, Dr. Eddingfield, at the time in question, and for a great many years theretofore, had been a practicing physician at Mace, Montgomery County, Indiana. He was duly licensed by the laws of that state, and held himself out generally to the public as a practicing physician. He had been the family physician of Mrs. Burk. She became dangerously ill and sent for Dr. Eddingfield. The messenger informed the doctor of Mrs. Burk's violent illness, tendered him his fee for his services, and told him at the time that there was no other physician procurable, and that Mrs. Burk relied on him and him alone for medical attention. It was shown as a fact at the trial that no other physician was procurable in time to be of any use, and that Mrs. Burk did rely on him for medical attendance. Without any reason whatever he refused to visit the patient or to render her any aid. No other patients were requiring his immediate service, and he could have gone had he been willing to do so. The patient died through no fault of hers, and wholly because of the doctor's refusal to visit her; that is, of his refusal to enter into a contract of employment with her. The court in passing on the case says:

"The act relating to the practice of medicine provides for a Board of Examiners, standards of qualifications, examination and licenses to those found qualified for practicing. The act is a preventative, not a compulsive measure."

"In obtaining State's license to practice medicine, the state does not require and the license

does not engage that he will practice at all, or on other terms than he may choose to accept. Analogies urged on the Court in argument and drawn from obligations to the public on the part of inn-keepers, common carriers and the like are beside the mark."

The administrator of Mrs. Burk brought suit against Dr. Eddingfield for \$10,000 damages. The trial court entered a judgment, dismissing the case, and the Supreme Court affirmed the judgment of the trial court.

But if the physician chooses to attend the patient, an implied contract at once arises between them, and it becomes his duty to continue as long as the sickness lasts, unless his employment is put an end to by the consent of both parties, or by express dismissal of the physician. His duty in this regard is well stated by the Supreme Court of West Virginia in the case of *Lawson vs. Conoway*, 37 W. Va., 159, also reported in the 18 L. R. A., page 627, the Court says:

"The physician is bound to bestow such reasonable and ordinary care, skill and diligence as physicians in the same neighborhood in the same general line of practice ordinarily have and exercise in like cases. Time and locality are to be taken into account, and the physician is bound to exercise the average degree of skill possessed by the profession in such locality. In the absence of special agreement his engagement is to attend the case as long as it requires attention, unless he gives notice of his intention to discontinue his visits, or he is dismissed; and he is bound to exercise reasonable and ordinary care and skill in determining when his attendance should cease, but his engagement is not to cure the patient. That is, he does not insure that his treatment will be successful. The mere failure to effect a cure does not even raise the presumption of want of proper care, skill and diligence. It is the duty of the patient to co-operate with the physician and to conform to his prescriptions and directions, and if he neglect to do so, he cannot hold the physician responsible for his own negligence. On the other hand he has a right to rely upon the instructions and directions of his physician and incurs no liability by so doing."

In this connection I might say that it is the duty of the physician to give proper instructions to the patient's nurses and attendants, and his failure to do so might be actionable negligence. But, of course, the physician is not liable for the result of carelessness of the nurses unless his own carelessness also contributed to the injury, nor is he liable for the negligence of the nurses in a hospital where the patient is placed, and over whom he has no control.

It may be of some interest to you to know that the liability is just the same whether the physician is employed by the patient himself or by some third party for the patient, or by nobody at all. If the doctor undertakes the case, no matter how he came to undertake it, his liability is the same, and this is true even in case of charity patients, where the physician is to receive no fee and expects none.

In the case of *McNevin vs. Lowe*, 40 Ill., 210, our Supreme Court says: "If a person holds himself out to the public as a physician,

he must be held to use ordinary care and skill in every case of which he assumes the charge, whether in that particular case he has received fees or not."

When the treatment shall cease and how frequent the calls on the patient shall be, are matters within the judgment and discretion of the physician.

If there is a well established mode of treatment, it is the duty of the physician to follow it. By that I mean, the doctor must not experiment with his patient; but if he does depart from the established modes of treatment it is a question of fact for the jury on all the evidence to determine whether or not the treatment was reasonably skillful under all the circumstances. If, however, the doctor departs from the well established mode and injury results because of the treatment, he would be liable.

In the case of *McKee vs. Allen*, reported in the 94 Ill. App., 148, Cora M. Allen sued Dr. McKee for malpractice. The doctor was called to treat her while she claimed to be suffering from sciatic rheumatism. He advised a surgical operation, and after considering the matter for a week or two, as she suffered greatly and did not improve any, she consented. She was removed to the West Side hospital in Chicago, and there the operation was performed by the attending surgeon assisted by Dr. McKee. An incision was made in the left leg at a point where the large sciatic-nerve is readily located. The nerve was pulled out of its sheath and vigorously stretched. It was then restored to its place, and the incision closed. The knee, ankle and hip-joints were then manipulated in order to break up the stiffness which existed in them, and to give them as much natural motion as possible. To prevent contraction, the limb was kept stretched by weights for some weeks. The incision healed, and after seven weeks of hospital treatment, the patient was removed to her home against the advice of Dr. McKee. At the time of the trial she had not fully recovered from the disease, and the leg affected was, it is claimed, contracted and shorter than the other. It was claimed at the trial by the plaintiff that the limb should have been treated with external applications and proper prescriptions to be taken internally and that by reason of the failure to do that, and resorting to a surgical operation, Mrs. Allen was caused unnecessary suffering and had become permanently disabled. Six medical experts were called by the plaintiff as witnesses in the case. As their names may be of some interest to you I will state they were called in the following order: Dr. Rose, Dr. Ranger, Dr. Ellis, Dr. Van Patton, Dr. Walgemott and Dr. Blair. The variety of their views and the splendid originality which they exhibited in their disagreement as to the manner of treatment, is very refreshing. Some thought the treatment very proper; some thought it exceedingly improper; some thought it would be certain to make the case worse; others thought that the physician in attendance would be the best judge as to what should have been done. The court says on that point:

"A difference of judgment among medical men as to the best course and method of treat-

ment does not by any means tend to prove that either party is wholly wrong or wholly right."

"A physician who has given a patient the benefit of his best judgment is not liable for negligence even if his judgment is erroneous, unless the error is so gross as to be inconsistent with reasonable and ordinary skill and care." Again the court says:

"The question is whether appellant was justified under the conditions shown by the evidence in recommending surgical treatment in this particular case. It is the duty of physicians and surgeons to exercise reasonable and ordinary care, skill and diligence in the practice of their professions. To this extent they are liable and no other. They are not required to possess the highest, but only reasonable skill. The burden of proof is upon the plaintiff in an action for malpractice to show the want of such skill, care and diligence, and also to show that the injury complained of resulted from failure to exercise these requisites. This has not been shown in the present case. It can not be said, as a matter of law, that where a physician recommends a method of treatment, recognized and approved by the standard authors upon medicine and surgery as appropriate in hand, and consults another physician or surgeon who has had experience in the use of such method as appellant did in this case, who after examination of the patient concurs in his judgment, and the patient submits to the treatment upon such advice, that he has failed to exercise ordinary care, skill or diligence in making such recommendation. If he has not so failed, then he is not liable, and the physician or surgeon is not an insurer of a successful result."

The report of the case fails to state what damages the jury gave Mrs. Allen, but the Appellate Court reversed the judgment on the ground that it was not sustained by the evidence.

The amount of skill which the physician should possess, depends to some extent upon his location. The courts have decided that reasonable skill which the law requires of a physician is such skill as ordinary physicians in cities, towns or localities of a similar nature to the one in which he resides, have, and exercise. As was said in a recent Massachusetts case, "The physician who practices in a rural community or in a village is not expected to be eminent in his profession, and the rule is that he shall have such qualifications as doctors who reside in such towns usually have. It would not be enough to say, he had such qualities as physicians in that particular town have, because it might happen that only quacks or inferior physicians lived in that particular town or locality. (128 Mass., 131).

What has here been said of physicians applies with equal force to the specialists and each physician is to be judged by the standards of the particular school of medicine to which he belongs.

What is the liability of a physician who can not himself attend a patient and who sends a substitute? Cases of this sort have arisen quite a number of times. A typical case involving this question is that of Hitchcock vs. Burgett, reported in the 38 Mich., 501. The

doctor who was first called was about to leave the city, and recommended that if a physician were needed during his absence, a certain Dr. Stillwell was to be called. A physician was needed and Dr. Stillwell was called. A suit for damages for malpractice resulted, Dr. Hitchcock who recommended Dr. Stillwell being made the defendant. The evidence showed that there was no sort of business connections or relationship between Dr. Hitchcock and Dr. Stillwell, nor was there any agreement that Dr. Hitchcock would see Stillwell paid for his services. The court held that under such circumstances there could be no liability on the part of Dr. Hitchcock. If they had been associated in practice in any way, a different rule would obtain. * "

In some instances it has been held that conditions resulting from the treatment of the patient are sufficient to raise the legal inference that the treatment was unskillful.

Such a case is *Mitchell vs. Hindman*, 47 Ill. App., 432. The plaintiff, Flora Hindman, was then 72 years of age, and while at school at Carbondale fell and received a Colles fracture of the radius of the left arm about one and a half inches above the wrist joint. Drs. Mitchell and McAnally were practicing in partnership and were employed to attend the patient. Dr. McAnally and Dr. Lee reduced the fracture, put the arm in a Levis splint made of tin, of adult size, and bandaged the arm. Dr. Lee merely assisted in reducing the fracture and saw the case no more. Drs. Mitchell and McAnally had exclusive charge of it thereafter. The specific ground of complaint was that the hand was so tightly wrapped with bandage and kept in that condition so long without change that, through lack of circulation, ulcers formed; the flesh gangrened and sloughed off, and thereby the little girl had practically lost the use of her hand. She could not flex her thumb or fingers so as to grip anything, and the question was, did that condition result from the break or from the treatment of it. The jury found against the defendants, judgment was entered for plaintiff, and the defendants appealed the case. The Appellate Court among other things, says:

"These appellants probably are skilled in their profession, but in this instance the evidence shows they did not observe that care, or use that skill imposed on them by law. They were intrusted with a grave responsibility, a proper discharge of which was far reaching in its consequences. The law will not permit them to be neglectful in the discharge of that duty, with impunity, whereby such serious consequences may result as disclosed by the evidence in this case. The evidence shows not a lack of skill or judgment but a lack of care and attention." The judgment in the case was affirmed.

Another interesting case of a similar nature was passed upon by the Supreme Court of Minnesota. It was a case of miscarriage, and a portion of the placenta was allowed to remain. Septicemia resulted, and was followed by gangrene and the loss of the patient's limb. The Court held that in the absence of some reasonable explanation, the results were sufficient to show either negligence or unskillfulness.

Of course it goes without saying that if the patient violates instructions, or if the nurses fail

to obey the doctor's orders without fault on his part, there can be no liability resting on him for the results of their negligence, and if the patient's conduct aggravates or intensifies an injury caused by the physician's mistake want of skill or carelessness, such aggravation might be shown to lessen or mitigate the amount of damages, but it would not be a complete defense.

A mistaken diagnosis does not give a cause of action, unless such mistake was the result of carelessness or unskillfulness.

It has been held that where the physician informs the patient of his want of skill and experience, there would be no liability in case of improper treatment, unless the injury results from want of care rather than want of skill.

There is an interesting case quite out of the usual line, and so far as I could ascertain which stands alone, the case of *DeMay vs. Roberts*, reported in the 46 Mich., 160, where a physician took a non-professional friend with him to attend a case of obstetrics, when there was no emergency requiring the latter's presence. The layman remained during the treatment of the case, the patient and her family supposing him to be a doctor or at least a medical student. Among other things the court said:

"In obtaining admission at such a time and under such circumstances without fully disclosing his true character, both the doctor and his friend were guilty of deceit, and the wrong thus done entitles the injured party to recover the damages afterwards sustained." The judgment in the case was affirmed.

In the case of *Murdock vs. Walker*, 43 Ill. App., 590, a doctor was held liable for the death of a person who was killed by taking a prescription which he had improperly written by mistake or through negligence. And it has been frequently held that a physician who leaves a patient at a critical stage of the disease without sufficient reason or without notice in time to enable him to procure another medical attendant, is guilty of such culpable negligence as would render him liable.

The question has often been raised whether a judgment in favor of a physician who sues for his fee is a bar to a subsequent suit by the patient for damages for malpractice, and the courts of last resort in different states have expressed different views about it.

The New York courts take the view that such a judgment places the matter *res judicata*, that is, that the whole matter has been judicially determined and settled by the suit for the fees, and can not again be litigated.

In the case of *Goble vs. Dillon*, 86 Ind., 327, the Supreme Court of that state adopts a similar rule, but the Supreme Court of Wisconsin maintains the opposite view.

I am not aware of any Illinois decisions on this point. It seems to me the true rule would be that if the question of malpractice was actually litigated in the first suit, that question could not again be litigated; but if the first suit did not dispose of that question, then it still remained open for litigation.

One of the most important and most interesting divisions of this interesting subject, that of insanity, and insane delusions, I have not touched upon at all. Indeed the subject is al-

together too wide and comprehensive for treatment in a single short paper.

Then too the matter has a criminal side which I can but refer to.

A physician in the practice of his profession may by his careless conduct be guilty of homicide. In the year 1884, at West Baylton, Worcester Co., Mass., a physician with the historic name of Franklin Pierce was called to attend one Mary Bemis. He caused her with her consent to be wrapped up in flannel cloths saturated with kerosene, for about three days, by reason of which treatment she died.

He was indicted for manslaughter, and found guilty by the jury. The conviction was sustained by the Supreme Court, Justice Holmes (son of Doctor Oliver Wendell Holmes), writing the opinion.

It was admitted in the case that the doctor had no actual malice or evil intent towards the woman, but the court says when he applied the kerosene to the patient's person in a way which the jury found to be reckless, seriously and unreasonably endangering her life according to common experience, he did an act which his patient could not justify by her consent, and which notwithstanding her consent amounted to an assault. Where conduct is so reckless and foolhardy the law will imply malice.

In the *Hardister* case, reported in 38 Ark., 605, a physician was held criminally liable for causing the death of a patient by gross ignorance in the selection and application of remedies.

Of course it is needless to add that in such cases there would be a civil liability for damages in addition to the criminal liability.

In conclusion, permit me to say that in the field of medical jurisprudence—Law and Medicine—two of the grandest professions or callings which can engage the attention of men are brought into close relationship to mutually aid each other in the endeavor to effect a noble purpose, the administration of justice.

It might, I think, be safely asserted that the nation has reached the highest plane of civilization which has succeeded in placing within easy access of its humblest citizen the opportunity and the means of obtaining speedy and complete redress of his wrongs, in other words, of securing justice, without money and without price. In the doing of this the physician and lawyer who properly appreciate the importance of their high honorable calling play a very important part, contribute greatly to alleviate the ills which affect the body politic, and to perpetuate the reign of true liberty, that is, liberty nourished and guided by just laws justly administered.

 Effingham County Medical Society.

 Meetings to be held second Tuesday in each month.
 Membership, _____
 Officers.

President.....J. B. Walker, Effingham
 First Vice-President.....J. N. Matthews, Alston
 Second Vice-President.....S. Clark, Effingham
 Secretary.....W. L. Goodell, Effingham
 Treasurer.....F. W. Goodell, Effingham

The Effingham County Medical Society held

its first monthly meeting Jan. 12, 1904, convening at 1:00 P. M., in the Commercial Club rooms at Effingham, with First Vice-President Matthews of Mason, in the chair.

This Society was organized Dec. 16, 1903. Twenty-four of the county's physicians originally signed the call for a meeting for organization. At this, the first regular monthly meeting (Jan. 12th) all the officers were present except the president, Dr. J. B. Walker of Effingham, whose absence was unavoidable. About twenty members were present, almost every town in the county being represented. The membership now is —.

After hearing the reading of the minutes of the previous meeting, the Committee on Constitution and By-Laws, composed of C. F. Burkhardt of Watson, T. J. Dunn of Elliotstown and F. Buckmaster of Altamont, made its report. The Constitution and By-Laws were adopted by the Society as prepared by the Committee, and the Committee was discharged. The Society was organized in affiliation with the State Society, its annual fees, \$3.00, its meetings held on the second Tuesday of each month at 1:00 P. M. in Effingham, and its Code of Ethics the principles of that of the American Medical Association.

The program committee, through its chairman, J. N. Matthews of Mason, reported the following program for this meeting:

Influence of Chloride of Sodium in the System in Relation to Albumen, L. J. Schifferstein, Effingham.

The Benefits to be Derived from Organization and How to Derive Them, F. Buckmaster, Altamont.

Rupture of Perineum, F. W. Goodell, Effingham.

What Is It? E. W. Brooks, St. Elmo.

Medical Exclusiveness, J. N. Matthews, Mason.

Wounds and Bacteria, W. L. Goodell, Effingham.

L. J. Schifferstein's article was a very learned and instructive one and was a resume of experiments conducted by the writer about twenty-five years ago at the request of the Centennial Medical Society, and the conclusions drawn therefrom. The writer's opinion is that the chief use of sodium chloride in the system is to facilitate the passage of albumens through the membranes and tissues, etc. The experiments were to determine the effect of pressure on osmosis of albumen through animal membranes. During the course of these experiments it was found that Sodium Chloride greatly facilitated the osmosis of albumen and further more that a current of electricity combined with mild pressure on a sodium-chloride-albumen solution gave the greatest per centage of albumen through the membrane.

The next article presented was that by F. Buckmaster. In his article Dr. Buckmaster considered the benefits to be derived from organization under three heads, viz:

1st. As a scientific body,

2nd. As a social body,

3rd. As a business body.

In the consideration of the business duties, they were subdivided as follows:

(a) Our duties toward each other.

(b) Our duties toward our patients and the public, and vice versa.

(c) Our duties toward this organization, and through it, toward the medical organization in general.

These divisions and sub-divisions were well considered, much stress being placed upon the importance of proper professional ethics and courtesy being shown each other. Due attention was given to the organization as a social body also. The physician's responsibility to his patient and vice versa were fully considered, showing the great disproportion existing between the two. In his article the writer advised that all members rate their patients, that the physicians in each town mutually agree to a fee bill and arrange many other propositions of a business character among themselves, but that all local fee bills correspond with each other the county over, and many other things showing the benefits to be derived by organization and how to derive them.

The next article was that by Dr. Brooks of St. Elmo, a member of the Fayette County Medical Society, on **What Is It?**, which article had reference to the itch, so-called, *Prairie or Illinois Mange*, or **What is it**, which has been such a common and pestering skin disease in this section for the past two years. Dr. Brooks' description of this prevailing ailment was very thorough and exhaustive. He maintained that a difference existed between the majority of the cases of **What Is It** and scabies or itch, yet maintained the former to be parasitic in origin. His treatment is the local application of Salicylate of Copper and Bi-chloride of Mercury, after proper bathing with medicated soap, to be followed by a change of clothes, together with internal treatment upon indications in those of impaired health. A very interesting discussion followed, many suggestions being made. Dr. Schifferstein suggested that it might be contagious papillary eczema and the Balsam of Peru applied locally would cure it. Sulphur and red precipitate ointments were suggested by other members. F. W. Goodell suggested Fowler's Solution internally, and J. N. Thresh of Beecher City said many stubborn cases had yielded to the internal administration of iodide of potash in his hands with red precipitate ointment locally.

This discussion finished the somewhat limited time allotted to the program for this meeting, the remaining articles to be read at the February meeting.

All in all much interest is being shown by the members and a bright future evidently is in store for our organization.

On motion of Dr. St. Clair, seconded by Dr. Scott, the Society adjourned to meet again February 9th, in the same rooms.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street.....	President
FRANK X. WALLS, 4307 Ellis Avenue.....	Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....	Treasurer
W. A. EVANS, 103 State Street.....	Chairman Medicolegal Committee
WM. HARSHA, 103 State Street	Chairman Membership Committee

FEBRUARY, 1904.

Discussion on the paper of Dr. Fanyo.

At the meeting of Jan. 6, 1904, a paper on *Trichuris Trichura* was read by Dr. Fred Fanyo. It was discussed by:

Mr. Albert Hassall (United States Bureau of Animal Industry, by invitation): Mr. President.—Dr. Fanyo has presented the subject in such a clear way, that it seems hardly necessary to make any comments on it. But I was rather surprised to hear him say that the parasite is so uncommon in Chicago. I should imagine in this town, at least, we should have found a very large percentage, owing, in the first place, to our large foreign element, and next, to the unhygienic manner in which quite a number of them are living. The parasite has been recorded by European writers as existing to as high as fifty per cent of the population. I think Devane reports such a percentage in Paris. Of course, Devane's remarks were published in 1859, probably, and at that date the conditions were considerably different from what they are today. But we have here in this city quite a number of those individuals that Devane spoke of, and others who are probably more unhygienic than are the Parisians. The fact that this worm has not been discovered so frequently in Chicago is not to be wondered at, because in my small experience of post mortem work on the human subject, I find on questioning physicians, who have had systematic post mortem work in charge, that it is rarely, if ever, they think of opening the intestinal tract to look for worms. They open the intestinal tract and look for lesions, but as for looking for worms it seems more or less out of the question. And I have been rather surprised, especially from the developments of the last few years, because you doubtless are aware of the fact that within twelve months the large number of cases of malaria which have been reported throughout the country has suddenly been decreased fully fifty per cent, owing to the fact that in certain districts in which anemia is so prevalent, and which has been ascribed to malaria, it has been found to be due to uncinaria, and many cases of anemia have been traced directly to worms. I should be very much inclined to think that, if careful post mortem work is done, the percentage of worms of all kinds will be found considerably larger than most of you have any

idea of. Of course, in the majority of cases, I presume, the cecum is full of ingesta, such as are usual in most animals, and, I suppose, in the human subject it is not customary to make post mortem examinations directly after death as it is in the domesticated animals; consequently numbers of parasites are missed on that account.

Then, again, it requires a practiced eye. The trachuris is quite a large parasite, but when we come to look for it in the intestine, especially if it has loosened its hold on the intestine, it is difficult to find, particularly if it has undergone decomposition, and the contents become more or less macerated or digested.

Dr. Fanyo gave us the usual method for finding these worms, and if it is adopted, there is very little trouble in finding them. I will further suggest, however, that, after several washings, until the liquid is comparatively clear, adding a little water, and then turning the contents into a glass dish, such as, for instance, a glass developing tray. Then, if you will look through the tray, you will be enabled to see the parasites a great deal more easily than otherwise. The tray can be transferred from one physician to another, so that you can get transmitted light and direct light. By that means you will come across worms which you would not otherwise.

I have been hunting for worms for twenty years, and these are all matters of practical experience, and I can assure you, I have found parasites which any ordinary individual would be unable to find with a low power microscope, and it has only been the result of careful watching of the pan, or by using this method and knowing exactly just what you are to expect. But concerning the trichuris, I think if the physician who makes post mortem examinations will look a little more carefully, he will find there are considerably more cases of trichuris than he has any idea of. If the physician, provided he has the time, would only make fecal examinations, he would find a great number of people infected with them. Unfortunately, I have not had an opportunity to do much work on human subjects, but I know as regards domesticated animals that these parasites exist far more commonly than one has any idea of, even in the so-called healthy animal, and it is only when animals are poorly housed,

or badly fed, that the parasites increase in number and symptoms are made manifest. I know it is rather hard to expect a physician to make fecal examinations; in the majority of cases it is as much as he can do to rush through a busy day; but there is absolutely no excuse for the men connected with hospitals, and it is very regrettable that they not only will not do this, but will hardly allow anyone else to do it. I am not speaking of Chicago particularly, because my experience here is limited; but I can speak of Washington. On several occasions we made attempts to determine the amount of parasitism in the Children's Hospital. Each time we began very nicely, and the first day or two we got things in working order; we had quite a number of stools saved, but about the third day there was an excuse for the limited number of stools, and before the end of a week it dwindled down to no cases, and, of course, things like that are very disheartening. The work done at St. Elizabeth's Hospital was of an entirely different character. It is very valuable, because the work was very well done, and the service was complete from beginning to end. Every patient in that hospital was examined, and the examinations were all made very faithfully, so that the data gathered may be freely quoted, and it will stand as a means of comparison in other cases.

I do not know that there is much to say about the worm itself. You know it is a blood-sucker, consequently it is an exceedingly important parasite. A heavy infection would doubtless produce a pernicious anemia; and, in fact, I can remember, about ten years ago, making a remark to a very well known pathologist in Baltimore about the worm. He said, "Why, the worm is harmless," and doubtless you have read the same statement in every text book that the worm apparently causes no disturbance. When he said it was harmless, I replied, "nonsense; the worm is a blood-sucker, and it is an exceedingly dangerous parasite." I called to his mind cases of quite extensive disease in pigs as the result of a closely allied worm, and he made a remark at the time that if this was true, it would account for a number of the unexplained cases of anemia in children. I said to him that when the next opportunity presented itself, if a post mortem examination was made promptly after death, it would be found that quite a number of these worms had burrowed some distance under the mucosa, and there would be some difficulty in removing them without breaking their necks. Whether that pathologist has ever made any post mortem examinations with this end in view or not, I do not know. But the fact remains, the worm is an exceedingly dangerous one. While I should not consider it as dangerous as *uncinaria*, at the same time, the fact that the worm burrows, if there is any danger of bacteria, for instance, it must tend to give a very complete inoculation, because it would doubtless carry ova well in under the mucosa where they would be given an opportunity to propagate. In *uncinaria*, you understand, the worm does not burrow, but simply adheres to the mucous surface, and by its special armature

makes a wound in the wall, and after it is engorged with blood loosens its hold, leaving a gaping wound, and this has been considered by many physicians as a means of infection with various bacteria. I should consider it to be so in a case of tuberculosis. If tubercle bacilli can get to that portion of the intestine, I should say there would be considerable danger of the formation of tubercular foci there.

I think, gentlemen, there is very little more left for me to say, for the reason that Dr. Fanyo has covered the ground so well. Let me say again to you, if you will take care to examine cases of anemia, you will undoubtedly find a number of them not due to tuberculosis or to malaria, but a large percentage of them to worms.

I have been surprised that no one present has reported having found the large Russian tapeworm in this city. We have quite a large Russian element here, and not only Russian but German, where the worm is quite common. I should think that these individuals coming over to this country year after year would naturally bring infections with them. While I was in Boston I went into the Museum of the Harvard Medical School and saw a number of these tapeworms. True, they have been collected during a number of years, the date on one of them being 1836, but still Boston has not such a large continental population as Chicago has. I have no doubt, if you will take trouble to use the microscope in cases of chronic diarrheas and anemias, you will find a great many more cases of worms to contend with than you had formerly supposed.

G. Frank Lydston: With reference to the point brought out by Mr. Hassall as to the relation of intestinal parasites to anemia, he will find that the profession has not entirely neglected that phase of the subject. I believe the first paper in regard to the etiology of certain pernicious cases of chlorosis was published about twenty years ago or more, in which it was shown that *ankylostoma duodenale* was unquestionably the cause of some of the more severe cases of chlorosis in tropical countries.

While I have had no experience with this particular type of parasite, still some remarks made by Mr. Hassall were interesting to me because I have had considerable experience with the foreign population, of recent importation, in the matter of intestinal parasitism. I chanced to serve for a time as resident physician to the Immigrant Hospital, Ward's Island, New York, a good many years ago, and prior to entering that institution I thought I knew something about lumbricoids, and their relation to intestinal diseases, particularly in children. I was surprised at the number of worms I saw there. I thought some of the inmates were trying to play jokes on me, because hardly a day would pass, when I entered the hospital wards, without finding large lumbricoids which the patients had vomited, lying in vessels beneath the beds.

It was nothing unusual for adult patients to vomit worms so large any one who had had no experience with the enormous worms that these patients carried about in their anatomy, would have supposed they were some sort of reptile

that had been surreptitiously introduced into the wards. Some of them were as large as the small grass snakes which we see in the country. In one instance a very peculiar condition developed. A woman, about forty years of age, had developed ascites before she was admitted to the hospital. We were not doing very aseptic abdominal surgery at that time (over twenty years ago), but I had surgical enthusiasm, if nothing more, and I tapped the patient several times with a trocar to relieve her of ascites. She died after several weeks. A postmortem examination was made, and I found that the peritonitis, which had produced the ascites, was apparently due to the impaction of a mass of large lumbricoides in the cecum. The colon was greatly distended; there having been complete obstipation for several weeks before death, and the mass was considerably larger than a clenched fist. Since my experience among those immigrants I have suspected that possibly we have overlooked some very important factors in gastro-intestinal pathology.

With reference to the ignorance of the profession regarding intestinal parasitism, I recall a very interesting case that was brought to me for consultation some years ago when I was engaged in general practice. The patient, a woman, was passing bodies which seemed to be the pupae of some variety of parasite. The material passed consisted of small, brown, pointed, oval bodies, varying from one-quarter to half an inch in length. They were unlike anything I had ever seen. Nobody was able to classify them. I submitted specimens to two naturalists friends, hoping they would shed some light on the subject, but it was suspected that the woman was hysterical and was simulating the passage of the parasitic bodies, whatever they were. The patient was under the care of one of my professional friends for over a year, and she persisted in passing these parasites with the stools. If she was simulating, I don't know where she succeeded in obtaining the organisms.

At the meeting of Dec. 2, Dr. R. W. Hardon read a paper, see p. 575.

Discussion of Dr. Hardon's paper.

A. D. Bevan: I have been very much interested in the report of this case. I happen to have quite a group of hypernephromata in my records; some seven or eight. I observed the first case in 1888 or 1889; the last one is under my care at the present time. I think it would be well to accept the statement that hypernephromata occur in three groups: One, where we have adrenal rests in the kidney which do not increase in size and are found only at the postmortem or at an incidental operation. The second, where the adrenal rest in the kidney grows to a considerable size but remains benign. It is an adenoma; distinctly outlined and separated from the surrounding tissue, and which does not undergo any degenerative changes; nor does it form metastases. Such adenomata may be removed without removing the kidney, and they never recur. The third group is represented by the case the doctor presented. It is the malignant hypernephroma. Malignant in the sense that it grows to an enormous size; undergoes degenerative changes; eventually breaks through its capsule and forms

metastases. This is the group that comes to the surgeon and it is to be regarded as being fully as malignant as sarcoma of the kidney.

Judging from my own experience with these tumors, I am inclined to believe that hypernephroma is the most common type of malignant tumors of the kidney. I am sure that I have not seen as many other malignant tumors in the kidney as I have hypernephromata.

The gross specimen, to my mind, shows that it is to be regarded not as a benign hypernephroma, but as a tumor of the malignant type. It is already invading the capsule, and the report shows that there was adhesion to the colon. If this is true there can be but little doubt that the tumor will recur.

My last case gave a very interesting history of pain, hemorrhages and renal colic. One of my colleagues on the medical side made a probable diagnosis of tuberculosis of the kidney, but it proved to be hypernephroma. I operated and the patient made a rapid recovery. Two weeks afterward he developed a severe diarrhoea. One of my internes watched the feces very carefully and discovered some particles of tissue in the evacuations. Upon sectioning these particles they proved to be hypernephroma tissue, showing that the growth had by direct continuity invaded the wall of the bowel.

I want to mention one more point. In all my cases hemorrhages have been the marked feature in the history. The hemorrhages were constant and severe; at times so much so that the blood would clot in the bladder, which was freed from the clot with great difficulty. I am inclined to believe that there is no kidney lesion that will cause quite as marked hemorrhages as hypernephroma, and where we have a clinical history of such hemorrhages associated with pain and swelling, the probable diagnosis is hypernephroma.

Dr. J. T. Sullivan presented patients, see p. 575.

Discussion of Dr. Sullivan's cases.

A. D. Bevan: As the doctor properly stated, there is, in a large majority of these cases, overlapping. In some of our late difficult cases, where there has been overlapping, we found that we could obtain the best results by making a square mortise in either end of the bones, bringing the bones together and wiring them. There is less shortening than from any other scheme for union. We have done that in several cases, especially in fractures of the femur or humerus, and the result has been very satisfactory. In one case two operations were done by very competent men but no union was obtained. We performed this mortise operation, uniting the fragments with wire, and obtained very satisfactory results in six weeks. It is a well known scheme and I simply wish to call your attention to it in connection with the treatment of these cases.

At the meeting of Dec. 9, Dr. Jos. C. Beck read a paper, see page 582.

Discussion on the paper of Dr. Beck.

J. Holinger: I saw the little tube which Dr. Beck exhibited tonight some time ago, and the doctor explained its use to me. The idea is certainly an ingenious one, and reflects credit on

the inventor; but whether it is a panacea for all cases of suppuration is a question.

Let me speak of one or two points in connection with inflammation of the middle ear. We call a middle ear suppuration acute as long as the pus contains only one kind of microbe, whether it be streptococci, pneumococci, or staphylococci. As long as it is a pure culture we have an acute condition which has a tendency to get well. But this tendency is changed as soon as we have a mixed infection of several cocci or bacilli. A chronic suppuration may be secondary to an acute one. There is such a thing as a chronic suppuration of the middle ear from the onset of the inflammation. That is the first point. The second point is this: In the acute stage of inflammation of the middle ear we have, if the membrane is freely ruptured, or after we have helped along with paracentesis and made a long wide slit for the secretions to pass out, we have a free seropurulent or serous discharge. That is the usual run of these cases.

Dr. Beck says that his method of packing is especially adapted for this stage. There is often such a large amount of discharge that in one night big pieces of cotton are saturated with secretions. The packing does not improve the drainage. In these cases, as in most acute inflammations, the indications for treatment are rest, or as little handling of the case as possible. We cannot do much to relieve in this stage, but we can hurt considerably. We have to let this stage pass, and wait until the secretions are less copious. If the pain is too great, we should use narcotics. What do you do with a packing in this stage? There is a free outlet. You have free drainage from the external ear, and all you have to do is to catch the secretions on the outside. The capillary drainage you put in there is not as complete as the natural drainage produced by simply lying on the ear and allowing the secretions by their own gravity to run out. If you want to avoid drying of the secretions or the formation of crusts, all right; apply cotton and put on a bandage around the head to catch the secretions; but I do not see the advantage of gauze packed away down in the external meatus. There is no advantage that I can see to be derived from this method of treatment. But much harm is easily done. Only a short time ago I showed a patient at one of the meetings held in this room where packing had done decided damage. In this case it was done by a general practitioner. The question is, will every general practitioner buy this little apparatus when he has a case of suppuration of the middle ear? Will he think of it? The only thing he thinks of is that he has to pack the ear, and to do so he will stuff cotton or gauze down into the external meatus. The patient I spoke about had his ears packed so hard that the packing went through the perforation of the drum into the middle ear. The whole drumhead was pushed inwards as high up as possible, and in this way the condition was made decidedly worse. While acute cases of suppuration of the middle ear usually heal with normal hearing within two and a half weeks or even less, in this case there was only hearing to the extent of one-twentieth of the

normal, that is, while a normal whisper could be heard at about twenty meters distant, this patient hears a whisper at not more than a distance of one meter, and I regret to say, with all my care, I was not able to add one centimeter of distance to the hearing. I have to attribute this result to the forced packing which was instituted. Therefore, I say, as long as we have easier methods which will give us good results, why resort to this method of packing or use the word packing, which has so many versions in the mind of the general practitioner. The general practitioner usually packs tightly, and that is just what Dr. Beck and everybody ought to avoid under all circumstances. With a simple syringe, with warm boric acid solution, we can never do harm in these cases. They will get well more rapidly, and with far less trouble to the patient, and physician, and with better results in the end.

IROQUOIS THEATER MEMORIAL.

The Chicago Medical Society recalls with feelings of deepest sorrow the catastrophe of the Iroquois Theater, which stands pre-eminently in the annals of human woe, in that it instantly transformed a holiday crowd of women and children into a mass of blackened corpses, changing a scene of joy into one of unutterable horror and making Chicago a vast city of mourning.

It records that many of its members promptly responded to the call for help that emptied every physician's office within a half-mile radius of the tragic scene and brought half a thousand doctors to the work of reviving the asphyxiated and of dressing the burned and wounded.

It desires to express its profound sympathy with those of its members and of the medical profession for whom this holocaust has become life's chiefest and ineffaceable sorrow.

It sorrowfully records that Dr. Joseph Zeisler lost his son, aged 17 years, a promising medical student; Dr. Thomas B. Swartz lost two daughters, aged 20 and 10 years; Dr. Charles S. Owens perished, together with eleven of his immediate relatives.

The Society can find no adequate expression for its feelings of condolence with the sorrowing survivors, and it has no other source of comfort save the thought that the loss of all these precious lives will not have been in vain, if the terrible event impress on the souls of our people the knowledge that

A civic spirit which takes pride in following out the law must be part of American character; that

Evasion of law sooner or later brings punishment to a community, and that

Consideration for human life and human happiness must take precedence over all questions of profit or of business enterprise.

The following have been elected members of the Chicago Medical Society:

Bigelow, Clarissa, 100 State st.
Blatchford, F. W., 92 State st.
Bowes, Leon M., Franklin Park, Ill.
Camfield, B. A., 126 State st.
Dunham, O. B., 451 W. 63d st.
Fisher, F. A., 83 E. Fullerton ave.
Kinloch, John A., 42 E. 46th st.
Kurtz, Charles J., 4711 Indiana ave.
Larsen, Ralph L., 62 E. Chicago ave.
Leonard, Edward F., 2182 N. Hermitage ave.
Lovewell, C. H., 6058 Wentworth ave.
McCollum, S. Josephine, 291 S. Lincoln st.
McConnell, George G., 5430 Ohio st.
McHugh, Thos. R., 4729 Ashland ave.
Maginn, E. F., 1496 W. Madison st.
Mueller, Frederick, 92 State st.
Printy, James A., 516 Lincoln ave.
Rischar, Edward, 174 E. Chicago ave.
Schindler, F. S., 1262 S. Halsted st.
Sherlaw, Joseph, 685 Normal ave.
Stephens, William R., Lincoln ave. and Robey st.
Sweeney, Jr., John S., Palmer House.
Thompson, M. W., 282 Grand ave.
Waddle, H. C., 609 W. Congress st.
Webb, W. J., 395 Wells st.
Webster, R. W., abroad until 1905.
Wilder, Loren, 260 S. Halsted st.

Change of Address.

Larned, E. R., 5751 Prairie ave., to 44 Franklin st.

* Chicago Surgical Society. *

Regular meetings held in Schiller Hall, the first Monday of each month from October to June at 8 p. m. Membership —.

Officers.

President E. Wyllys Andrews, 100 State st
Vice President M. L. Harris, 100 State st
Secretary A. E. Halstead, 2937 Indiana ave
Treasurer D. N. Eisendrath, 3125 Michigan ave

A joint meeting of this Society and the Chicago Medical was held January 13, 1904, with the president, Dr. E. Wyllys Andrews, in the chair.

The subject for discussion was **The Surgical Treatment of Bright's Disease.**

Dr. Arthur R. Elliott opened the debate with a paper entitled **The Medical Aspects of Decapsulation of the Kidneys for the Cure of Chronic Bright's Disease.**

A study of the statistics to date available showed the total number of cases of true Bright's disease operated upon was 76; died 36; mortality ratio, 47.36 per cent; improved, 26; improved ratio, 34.21 per cent; unimproved, 12; unimproved ratio, 15.78 per cent; rendered worse, 2; worse ratio, 2.66 per cent.

Of the 36 fatal cases, 13 died within the first week and a total of 20 during the first month following operation. He said we were justified in combining the mortality, unimproved and rendered worse ratios, and thereby estimating that 65.80 per cent of cases operated on in the various forms of Bright's disease failed to be favorably influenced.

On grounds furnished by statistics and considerations, the entire class of chronic interstitial nephritis was not adapted for surgical treatment. The only exception to this rule was the comparatively rare circumstances of an acute nephritis engrafted upon a chronic interstitial lesion, in which event the acute inflammatory attack might introduce the necessary element of intracapsular tension. The question of the admissibility of operation in cases of advanced chronic interstitial nephritis was answered by statistics. The mortality (76 per cent) was also a prohibitive one, and the chances of prolongation of life much less promising than those which medical treatment held out. Experience to date would seem to indicate that cases of chronic parenchymatous nephritis in young subjects, and especially those cases following acute infective nephritis, offered the most favorable material for operation. A study of the statistics of operations in parenchymatous nephritis indicated that a competent heart was the most important consideration influencing the decision to operate.

Dr. Elliott closed by emphasizing the following points:

1. Chronic Bright's disease in its development constitutes a diseased condition of the entire system.

2. It is a disease of very gradual development, and in the great majority of cases, has existed for months and years before the patient comes under observation.

3. It is produced by a chronic toxemia, either systemic or infective in origin, which produces coincidentally as a result, widespread arterial and cardiac degenerative changes, which, being once established, are permanent, and which in their development eventually constitute the most threatening element of the disease.

4. General edema or anasarca in chronic renal disease as in many instances in great measure a cardiac dropsy brought about by advancing myocardial degeneration. It is occasionally so in chronic parenchymatous nephritis, and almost invariably so in chronic interstitial nephritis.

5. It may be stated that in like manner, developing anuria and uremia in chronic nephritis may be largely cardiac in production, the functional inadequacy of the kidneys having its inception in the fall of blood pressure, incident to circulatory failure.

6. In the later stages of chronic nephritis of whatever character, the case is apt to take on these cardiac aspects which virtually convert the therapeutic problem into a question of sustaining a failing heart.

7. Albuminuric retinitis must be looked upon as one of the terminal symptoms of chronic nephritis. The concordance of opinion places a limit of two years upon the prognosis after the development of this complication. The statistics of operated cases gathered by Suker, show that in place of prolonging this limit of expectancy, operation has a decidedly contrary effect.

8. It is to be borne in mind that chronic nephritis is a disease of slow and spasmodic development. It is well to realize its exacerbations.

tions and remissions, so as to avoid the error of mistaking remissions for cures.

9. The mere fact that the general condition of the patient improves somewhat after decapsulation does not establish the validity of the operation, for hygiene and rest will do the same for the patient to a remarkable degree in many cases. As the factors of hygiene and rest are invariably associated with the surgical procedure, it is possible that the resulting benefit may, to some extent, accrue from those sources.

10. The results of experimentation demonstrate that within a period of three and one-half months after decapsulation a new, and in most cases, a tougher fibrous envelope has taken the place of the original capsule. This fact may account for the many relapses and deaths after that period in operated cases, and in chronic cases, at least, it narrows the prospect of improvement to a period of months.

Dr. Geo. F. Suker followed with a paper entitled **A Consideration of the Surgical Treatment of Chronic Bright's Disease From an Ophthalmic Standpoint**.

After presenting and analyzing the statistics which the author had collected from the literature, he summarized as follows:

1. As, at least, 25 per cent of all grades and varieties of chronic Bright's disease present evidences of retinal or other fundus complications; and

2. As these fundus complications are usually of the degenerative inflammatory type, attended by like changes in the kidney; and

3. As the cardio-vascular system is or shortly will be seriously involved; and

4. As such changes may develop in the fundus without any subjective symptoms on the part of the patient; and

5. As these retinal complications are indicative proof of a general systematic circulating toxin; and

6. As the death rate of this class of patients under medical treatment (hospital and private practice) is about 75 per cent for the first year, and, at least, 85 per cent for the second year, scarcely any surviving four years, and practically 100 per cent when operated upon; and

7. As these fundus findings are of paramount prognostic import in an inverse proportion to the age of the patient; and

8. As the medical aspect of this question as presented this evening by Dr. Elliott offers as good, if not far better, results than the decapsulation in like cases; therefore, this climactic array of positive clinical data, which is so palpably available, must not be disregarded on part of the surgeon in endeavoring to establish the validity of this operation under discussion. Especially so when it can be said that in this class of cases some verily died because of the operation and others in spite of it, and all fell within the pale of the classic two-year limit, and a larger share died within six months.

Finally, the writer has reasons to believe from the facts above mentioned, that he has conclusively proven decapsulation of the kidney for chronic Bright's disease to be absolutely contraindicated whenever such patients have a

retinitis or a neuro-retinitis albuminurica, with or without retinal hemorrhages.

E. Wyllys Andrews reported four cases of decapsulation of the kidney for Bright's disease. The first was a man, 32 years of age, who had had chronic interstitial nephritis for some years. Double decapsulation was performed, following which there was decided improvement in the total amount of urine passed, as well as solids, and for a period of three weeks thereafter the urea exceeded one per cent and remained between one to two per cent, while the number of casts was about the same. There was a small amount of albumin in the urine. The subsequent history showed a reduction in the amount of urea again. The patient was watched carefully, and at the end of nearly eighteen months after decapsulation there was very little change for the better, nor yet was the patient worse.

In case two the man had been six months before, and six or eight months after, decapsulation, constantly on the strictest diet, and while he reported himself robust, the urinary findings were about the same as before the operation.

Case three was a child, 9 years of age, whose kidneys were decapsulated under spinal anesthesia. The immediate result of the operation was favorable; but later the patient was as bad as before decapsulation.

Case four was one of intermittent hydro-nephrosis and nephritis, and was operated on two months ago. There was relief from all of the symptoms by a combined nephropexy and complete decortication of one kidney, but he thought the nephropexy brought about the relief rather than the decortication.

A. J. Ochsner said we must look upon cases of nephritis as forming two distinct classes. In the one class we had healthy kidneys, one of which had been injured mechanically, and this injury having been corrected by fixation and decapsulation, the kidney itself contained the elements which were necessary for its recovery. This class was discussed by Edebohl in his first paper. In the other class, with systemic causes, the conditions were different. Tension might depend upon edema of the kidney. It was increased in these advanced cases by the edematous condition of the organ itself. After relieving tension there was a flow of edematous fluid the same as was found in cutting through the remaining edematous tissues. Having relieved edema, it was easy to imagine that the kidney tissues would be relieved of a certain burden, and the tissues which are practically inactive before became active again. But these kidneys did not possess the elements necessary for recovery ordinarily.

As regards patients suffering from advanced nephritis, he had operated on seven cases which seemed hopeless. All had died with the exception of two. One of them, the last one operated upon, was a man 51 years of age, an alcoholic, with marked edema, patient having all the symptoms of advanced interstitial nephritis. While he was still alive, he thought he would soon die. One case corresponded closely to the one narrated by Dr. McArthur. The patient was 36 years of age. He was

operated upon June, 1903, and at the present time, was well. Of the others, five out of seven had died, one of them within two weeks after operation. One improved materially after operation upon one kidney, but died within a week, or ten days from acute uremia. Another patient lived for a few months, and then died from uremia. Two were alive, one of them having been operated upon only a few weeks ago.

He said sufficient observations had now been made to justify the profession in accepting the conclusions drawn by Dr. Elliott.

L. L. McArthur reported a case of chronic nephritis in which he resorted to double decapsulation of the kidneys. Recovery from the operation was uneventful.

The final conclusions applying to this case were:

1. General condition much improved since operative interference. The element of time and two periods of absolute rest in bed for two weeks each were considered here as possible causative factors, while, on the other hand, be it noted, the patient for over a year before operations was under excellent medical care and given full benefit of diet, hygiene, and change of climate.

2. Distinct improvement in the quantity and quality of the urine secreted from the kidney first operated upon as compared with the unoperated kidney.

3. Improvement in quality and quantity of urine from both kidneys since the operations.

Alexander Hugh Ferguson said that surgeons should study their cases more carefully and find out what cases were suitable for this operation and those which were not.

With an experience comprising over twenty operative cases, he put down the indications for surgical intervention in Bright's disease as follows:

1. He would decapsulate all cases of tender and floating kidneys, and suspend the kidney. He had made inquiries of thirteen patients who had been operated upon for kidney trouble, and of this number all but three had been decapsulated, pointing out the fact that the kidney, after it had lost its mobility and interfered with the circulation, produced a low form of renal inflammation which under the microscope proved to be nephritis.

2. He had previously refused to operate upon cases of floating kidneys because there were marked evidences of Bright's disease, but now he considered it an indication for decapsulation.

3. Decapsulation of the kidney was indicated in nephritis itself.

He detailed several cases, and expressed himself as believing that there was a legitimate field for renal decapsulation.

Emil Ries narrated an interesting case of hematuria in which he resorted to decapsulation. At a subsequent operation it became necessary to remove the kidney. The newly-formed fibrous capsule along the kidney was about as thick as one's little finger. From the

kidney removed over six hundred sections were made. He had stained and examined every one of these sections, and among them there was but one anastomosis, and this was near a stripe of connective tissue which followed the path made by him in the first operation with his finger, which he inserted into the pelvis of the kidney. Even this was not a direct anastomosis of kidney tissue, but of scar tissue to scar tissue, which was one of the smaller vessels in the capsule. The six hundred sections were taken from numerous parts of the kidney. This proved conclusively that the theory of success of this operation (decapsulation), that it might be due to anastomoses forming, was incorrect.

After mentioning five cases in which he had resorted to decapsulation of the kidney, he said he was skeptical as to the ultimate results of this operation.

R. B. Preble said his attention was first called to this subject by a report of two cases which Dr. Ferguson presented before the Chicago Academy of Medicine. At that time he objected on the ground that the cases were reported as symptomatically cured of Bright's disease. The expression symptomatically cured carried with it two implications. First, the symptoms were there and were the result of the condition; second, the symptoms disappeared after the operation. It also carried the further implication that the fundamental process which underlay the symptoms was not altered by decapsulation of the kidneys. The symptoms were merely relieved by it.

The first case, as he recalled, reported was diagnosed clinically as probably a stone in the kidney, on account of pain in the back. The patient was operated upon; no stone was found; a portion of the kidney was removed, examined microscopically, and showed the microscopic appearance of chronic nephritis.

The second case was a patient, who had had, at irregular intervals, elevation of temperature, which was interpreted as being due to infected kidney. Patient was operated on, and no pus was found. A section of the kidney was removed, and the same condition found as in case one.

Dr. Preble pointed out in a very forcible manner that pain in the back was not a symptom of chronic Bright's disease, nor was elevation of temperature.

These two cases, he said, formed the starting point that decapsulation had relieved these two patients of symptoms which were due to chronic Bright's disease.

He said throughout the literature the word nephritis and chronic Bright's disease were used interchangeably. They were not identical terms. The difference between the two was clearly pointed out.

In following the literature it was necessary that cases be more accurately observed, and in support of this he quoted at length from Dr. Ferguson's last report, showing that not only some of Dr. Ferguson's cases, but many of those found in the literature were improperly classi-

fied. The internist could not recommend his patients to undergo an operation which showed a mortality of 76 per cent, as had been pointed out by Dr. Elliott. Renal decapsulation, therefore, was an unjustifiable procedure, without any reasonable, rational explanation having been offered as yet for its use, so far as he knew.

Arthur Dean Bevan, after reviewing Edebohl's first papers on the subject and pointing out how he had undertaken the operation of renal decapsulation, said he did not think the operation could be said to be the surgical treatment of Bright's disease, because, as a matter of fact, the great majority of surgeons throughout the United States and of the world had never accepted the operation as being a logical procedure. He ventured to say, that nine-tenths of the surgeons, who were members of the American Surgical Association, had not accepted renal decapsulation as a logical operative procedure. While he thought credit should be given to Ferguson, Edebohls, and others for working out the problem, the time had come when the profession could safely say that stripping of the capsule as a treatment for Bright's disease was a complete failure, and should receive the stamp of disapproval of scientific men. Out of this work there had come some good, because it emphasized the importance of a class of cases in which another operation was of value, namely in cases of anuria, of essential kidney hematuria, in chronic pyelitis, with some nephritis, draining the kidney by a rapid nephrotomy was of a distinct value. It had effected a great many cures, and would accomplish more.

Randolph Brunson reported the case of a prominent physician, who presented all the classical symptoms of chronic Bright's disease. Ophthalmoscopic examination revealed typical albuminuric retinitis. After the patient had been treated for eight or ten months without any material improvement in his condition, renal decapsulation was advised as a last resort, reluctantly consented to by the patient, and doubly decapsulation was made. The patient fully recovered from the effects of the operation, but finally died of Bright's disease.

Joseph L. Miller said that any one who studied the statistics of Edebohls with a view to obtaining information as to the value of renal decapsulation immediately met with difficulty. The analysis and diagnosis were too indefinite to draw any conclusions as to the value of this operation in cases of nephritis. The profession needed a few cases, carefully studied before and after operation, to settle the question of the value of the procedure.

Gustav Kolischer thought Drs. Suker and Elliott had struck the keynote, that the value of renal decapsulation was not well established. It was very essential to make diagnosis based upon proper conceptions of pathology. The idea of suggesting decapsulation in a case of floating and tender kidney, or of excising a portion of the kidney, when there were no indications of nephritis, was based upon a wrong conception of the principles of inflammation, especially of renal tissue.

Chicago Gynecological Society.*

Regular meetings are held on the third Friday of each month from September to May inclusive. Membership 50.

Officers

President Emil Ries, 100 State st.
Vice Presidents. J. B. DeLee, 34 Washington st.,
Frank Andrews, 100 State st.
Secretary Palmer Findley, 100 State st.
Treasurer Chas. B. Reed, 103 State st.
Editor Rudolph W. Holmes, 387 N. State st.
Pathologist Gustav Kolischer, 92 State st.

Transactions of the Chicago Gynecological Society, at the meeting of September 18, 1903. The president, Charles S. Bacon, in the chair.

After calling the Society to order, President Bacon directed attention to the great loss the Society had sustained in the death of Dr. De Laskie Miller, a member, and also in the death of Dr. W. W. S. Playfair, the great London obstetrician. He spoke of the distinguished services these gentlemen had rendered in developing and advancing the science and art of obstetrics.

Dr. Gustav Kolischer read a paper entitled **Two Cases of Vaginismus**.

The discussion of this paper follows:

J. Clarence Webster: Mr. President—Dr. Kolischer has done well to call our attention to this subject. I am afraid that we must all, more or less, plead guilty to forgetting the part played by the husband in these cases.

I recall a case of great interest in which attempts at coitus had been unsatisfactory, owing to the intense distress it caused the woman. These attempts were carried on for about a month, and then ceased. Four years thereafter the husband told me about the case. He spoke of their happy life, but said it was a great source of discomfort that they could not live normally, and he gave me the impression that he had been very considerate. I said to him, "Why do you not have your wife examined by some person who could undoubtedly right the matter?" Some time afterwards, however, another physician told me that the husband was incapable of intercourse, and had suffered for years from such a condition as Dr. Kolischer has described.

Joseph B. De Lee: There is one point in the paper which brought a thought to my mind as to the position of the vulva in one of the cases. I believe the essayist said that the position of the vulva was nearer the sacrum. That condition I have noticed not seldom in women in labor, and I have noticed, furthermore, that they are more likely to have perineal tear when the vulva is situated lower down than when it is located higher up. This is a point I have not seen written about except in connection with a contracted pelvis.

Charles S. Bacon read a paper entitled **Obstetric Nomenclature**.

The discussion of this paper follows:

Joseph B. De Lee: I can echo the sentiments of Dr. Bacon and say that I have felt the need for a more concise and, at the same time, more comprehensive nomenclature, especially for calling and designating to the student mind the

*American Journal of Obstetrics.

various positions and presentations. With the exception of a few additions, however, I have found that the nomenclature decided upon by the International Medical Congress at Washington in 1887 is a practical one.

I disagree with the essayist in regard to the use of the occiput to designate all the positions, or all the attitudes of the head when it presents. I think the student, at least, would have difficulty in carrying in his mind the position of the head and its degree of deflection and flexion, if he were to use the occiput always as the point from which to form a mental picture.

The point Dr. Bacon makes about the station of the head is very well taken. While I have never written or spoken on the subject before, I have taught the following scheme to students, and they follow it and practice it very well. The importance of determining the station of the head cannot possibly be exaggerated. I believe if I were to tabulate the cases that I have discovered, both in my own work and in consultation work, in regard to the mechanism of labor, I should say that three-fourths of the errors that have been made and three-fourths of the operations that have been undertaken that have led to bad results, are due to the fact that the obstetrician did not determine the station of the head.

Next in frequency would be the fact that the obstetrician did not determine the position of the head.

In order to get a medical student to understand what I am talking about, after telling him the importance of determining the station of the head, I have always used the term, "the degree of engagement." I say the head was "in the inlet," when the bi-parietal diameter, the largest diameter, was in the inlet, but had not passed it. The head was then supposed to be fixed on the inlet, but not engaged. A second term is that the head was "engaged," which means that the bi-parietal diameter had passed the inlet, and was in any place from the plane of the inlet to the narrow pelvic plane, which runs through the ischial spines. When the head had passed the spines and had come down to the outlet of the bony pelvis, the head was said to be "at the outlet" of the bony pelvis. And, finally, when the head had passed the outlet of the bony pelvis and distended the soft parts, it was said to be on the perineum. It was "engaged;" it was "at the outlet;" it was "on the perineum."

These positions are pretty nearly the same as those described by Dr. Bacon, perhaps with a little variation in the geography, which clinically would cut very little figure. On that point Dr. Bacon and I are agreed. Any Latin term which will express clearly the various degrees of engagement or station is desirable. I have always used and taught English terms.

There is another point I want to bring out, although it is not original with me, but which was brought forth at the Congress of 1887, namely, a distinction or definition between position and presentation should be carried out. Presentation means that portion of the child which presents at the inlet, or is in the line of direction, or is surrounded by the girdle of resistance. Position is the relation of any arbitrarily selected point in the presenting part of

the pelvis to the four quadrants of the pelvis. Understanding, then, by position or positio the relation of any arbitrarily selected point to the four quadrants of the pelvis, we have at once a mind picture of the relations of the baby and mother, and, at the same time, we have an indicator as to what is going to be the mechanism of labor. This arbitrarily selected point in the presenting part is called the "point of direction," and this point is one that follows the direction of the force, producing changes in position with reference to the mechanism of labor. With this classification we have these advantages. Take, for example, occipito laeva anterior, we have presentation and position given; the occiput is the point of direction. The small fontanelle, for clinical purposes, is sufficiently close to the occiput to be taken as the point of direction. Then, if the student is taught that all positions of deflection, that is, all abnormalities of the mechanism of the head, are brought about, first, by deflection of the head, and second, by lateral inclination, he comes very near understanding the mechanism of labor.

In face presentations the chin becomes the point of direction, and follows the mechanism that the occiput did in occipital presentation. In brow presentations the root of the nose becomes the point of direction.

As to the position of the lateral inclined attitudes of the head, I hardly think a special nomenclature is desirable. If, in the inclined attitudes of the head, such as antero-parietal bone presentations and posterior parietal bone presentations, the student is taught that these are abnormal, that the mechanism is abnormal because the conditions accompanying it are abnormal, he will not need to settle on any given classification or nomenclature.

To sum up, the stand I take in regard to the subject of nomenclature would be this: First, the Washington nomenclature is very satisfactory. Second, that the additions proposed by Dr. Bacon and by Mueller of station or engagement are well taken. The word station is better than the word engagement, because we have to use the latter when the head is really not engaged, so that the word station is the more preferable to use. Perhaps, we might add the word transverse for certain positions. For example, it was formerly taught that the head always entered the pelvis in an oblique diameter, but experience has shown that it often enters in a transverse diameter. A Russian, whose name I cannot now recall, in one of Volkmann's Vorträge, writes on this subject of the head entering the pelvis in the transverse diameter. I have found that to occur quite often myself, so that I have added for the designation of this position the word transverse, and we speak of a left occipito-transverse and a right occipito-transverse. If an examination is made at the time the head enters the pelvis, we say that this is a left occipito-transverse or a right occipito-transverse. Perhaps with these additions there is very little to be added to the Washington nomenclature.

Gustav Kolischer: The paper of Dr. Bacon is certainly a very timely one, and shows the demand which is keenly felt by those who are engaged in obstetric theory and obstetric teaching, for a new nomenclature. Undoubtedly, there is

not only a lack of system and clearness in the usage of obstetrical terms, but, also a deficiency of terms in the English language. There is always more or less confusion in using the words "presentation," "attitude," and "position." "Attitude," for instance, should only be called the relation of the fetal parts to each other. We should not speak of the attitude of the head if we refer to its relation to the bony pelvis. The student first taught that attitude is the relation between parts of the fetal body, becomes confused if in the next place we talk about an attitude of the head in relation to the pelvic frame. Dr. Bacon has very well defined under what conditions we can speak about the so called "station" of the head. So far as the other terms are concerned which he proposes for general acceptance, I should like to say this: Experience shows that all ponderous terms which contain too many anatomic designations will never be generally accepted. An important point would be to define by the use of certain terms, the station of the fetal head in the beginning of labor in certain presentations. If, for instance, we have a face presentation, the relation of the head to the bony pelvis materially differs from the relation after it is in the medium planum, or low down resting against the perineum. Such a term which would correspond to the German word "Einstellung" is lacking in the English language. Another confusion exists in the nomenclature of the slightly deflected head presentations. While the majority of obstetricians will denominate the different categories of these presentations from the part of the fetal head which is lowest, and in the directing line, others derive the nomenclature from the relation of the anterior part of the skull to the pelvic frame, thus, confusing the categories of normal or abnormal rotation with deflection and inflection. Dr. De Lee objects to Dr. Bacon taking the occiput as the leading point in all not decidedly deflected head presentations, and afterwards, contradicted himself by saying that he always teaches medical students to pay most attention to the occiput in these cases. In fact, we cannot determine and denominate the presentation of the head in such cases from any other point on the head. I wish to state expressly that the presentation is always determined by this point of the head which at the particular stage of labor is the lowest one. This denomination and determination has nothing at all to do with the line of circumference, the girdle of resistance, or the pelvic parts at which the head in this particular moment strikes. An occiput presentation will be such whether the largest circumference is engaged high up in the pelvis, or whether the head is way down in the pelvis resting against the perineum. Dr. De Lee tells us that he teaches his students that all deflected presentations originally are occiput presentations. I do not think that this statement could be upheld. A slightly deflected presentation may become transformed under favorable circumstances, or through appropriate intervention into an occiput presentation, but which force should induce an inflected presentation to change into a deflected one? It is one of the leading points of all theories concerning deflected presentations, that the trans-

formation of the deflected into an occiput presentation necessitates an intermediate stage in which the fetal axis is elongated. But after inflection once took place, the intra-uterine and intra-abdominal pressure obviously will not permit an elongation of the fetal axis again. In as much as we do not strictly adhere in all instances to what is meant by position and attitude, and presentation; in as much as we have not a certain system, thoroughly applied, of deriving our terms from certain denominators, and in as much as the obstetricians will confound entirely different categories of obstetrical occurrences, there will always prevail confusion. We, furthermore, are in urgent need of a term determining the presentation of the lowest part of the fetal body in the beginning of labor.

Rudolph W. Holmes: I think to reconcile all medical men to one thought is going to be as insurmountable as to find the original sin. To come out now and try to put a new nomenclature before the profession is going to be impossible. It will be published; and that will be the end of it. What is necessary, is to have our present nomenclature refined and defined more clearly. If we begin again on a new track, the general practitioner will not be able to grasp the nomenclature. The general practitioner has got to be taught things as they are, but a little more refined, and if he can grasp these refinements of nomenclature a little better, a great deal will be done to advance obstetric practice.

My conception of presentation is this: It is that part of the fetus that presents at the brim. If it is the head, it is a cephalic presentation. If it is a shoulder, it is a shoulder presentation. If it is a breech, it is a breech presentation. The position is the relation of the arbitrary denominator to a particular point on the mother's pelvis.

In a normal labor with an occiput left anterior, the head is down; the vertex is in the middle of the brim, i. e., there is a vertex presentation, and the occiput points to the left and to the front of the mother. It is an exception to have an occipital presentation as such. It is really a misnomer to say an occiput left anterior. It is the vertex that presents. The occiput is merely the denominator of the presentation.

Face presentations bring up the point which Dr. Kolischer discussed. It is very unique to have a primary face presentation, that is, before the woman has had any labor pains, or where the contractions of pregnancy have not been marked. Undoubtedly these primary face presentations will be found more frequently when a routine external examination is made during the course of pregnancy. A face presentation is almost invariably a product of labor. That this is so, is evidenced by the fact that an occipito right posterior presentation is four times as likely to terminate as a mento left anterior as is an occipito left anterior to be converted into a mento right posterior, that is, a mento left anterior is just as frequent as a mento right posterior. The reason why so often you cannot find the chin when the face is above the brim is because the face presentation is not fully developed; it is still in the transitional stage of brow presentation. There are inherent difficulties, even in most multipara of getting the hand suf-

ficiently high to reach the chin; therefore, the face presentation not being fully developed, the finger naturally comes in contact with the brow rather than with the chin. I feel, therefore, that the denominator always should be the index of the presenting part. For example, the denominator should be that part of the presenting surface which is the determining factor in the mechanism of the labor for the particular position: in the normal vertex the occiput is the logical denominator, the back is not necessarily in direct relation to the occiput in the course of descent and internal rotation, the chin is the logical denominator for face cases; for the mento point in relation to the pelvic points is of transcendental importance in the happy outcome of the case; the sinciput is the denominator for brow cases. One has but to consider the varied current methods of denominating brow cases to see how confusing it is to use any other denominator than the sinciput in the nomenclature of brow presentations; for instance, sinciput left anterior has been described as an occipito right posterior brow or back to the right brow, or a mento left anterior brow; when the four brow positions are thus described you easily can imagine the confusion to the student; if the back or occiput, to the right is used as the denominator for a sinciput left, anatomic parts are brought into consideration which have no direct, intimate, relation to the mechanism, and are misleading.

Another thing: the normal attitude of a baby in pregnancy and labor is one of flexion. Every frozen section made shows this, with one exception, and that was in a case of occipito posterior. Therefore, if frozen sections teach anything in the development of our knowledge of the mechanism of labor, it is the one thing that flexion is not a product of labor, but is the result of the attitude which is developed in advancing pregnancy: too often moulding is confused with flexion. The specimen removed from Dr. Willard's case of a dwarf beautifully shows this, and that it was between the fifth and sixth months. The little fetus is curled up in the uterus and the head is flexed. The head had already gone into relation with the chest which would permit the uterus to hold the baby in the smallest compass possible.

As regards the station of the head, Williams has shown that as soon as a portion of the head goes past the pelvic brim, the head begins to be fixed. But this is entirely a relative term. The fixation depends upon the size of the baby's head, the size of the pelvis, and the rigidity of the soft parts. The fixation, other things being equal, will occur in a primipara earlier than in a multipara with normal pelvis. When the bi-parietal and suboccipital bregmatic plane has passed the brim the head is engaged. Occasionally one may find that the head is away down on the pelvic floor, and because the conditions are so favorable one can still push the head up, but the definition is correct that the head is engaged because the bi-parietal and suboccipito bregmatic plane has passed the brim. Per contra, excessive moulding as in a justo-minor pelvis may suggest deep engagement when really fixation alone is present.

For teaching purposes I have been accustomed to use the method of describing "station" which is essentially that given by Williams, head floating, head fixed, head engaged, head on the pelvic floor, and finally distending the perineum.

I feel that the thing is to refine our present nomenclature rather than to largely replace the old by new terms.

J. Clarence Webster: I do not think the example of the Congress of 1887 is a very encouraging one, because I think very few obstetricians have paid much attention to it. I know that the editor of a recent text book on obstetrics, when asked if the nomenclature adopted by that Congress should be used, he replied, "Oh, no, let us stick to the old thing." I presume that as long as there are national differences, there will be differences in nomenclature. We go to one country and, if we are driving horses pass each other on the left side. In another country we go to the right side. We get there all the same, if we do not have a collision. It would be difficult to establish a uniform method of passing on the streets, which would be adopted by all nations. So it is in medicine. We find that differences arises in modes of description, personal, local and national and that it is exceedingly difficult to agree as to uniformity of nomenclature. Any effort that is made to simplify teaching methods is praiseworthy but I am not persuaded that Dr. Bacon's suggestions tend to simplification. I believe that the adoption of his propositions would mean greater difficulty, certainly for those who are beginning the study of obstetrics.

I would like to refer to a number of his suggestions. Take, for instance, his desire to alter the definitions of the conjugates, terms applied to certain sagittal diameters of the pelvis. I do not see that any term can be clearer than "anatomical conjugate," which means the diameter joining the middle of the promontory and the upper margin of the symphysis. The "conjugate vera" is the diameter between the promontory and the nearest part of the symphysis, i. e., a point slightly behind and below the upper margin of the symphysis. I prefer to use the term "obstetrical conjugate" rather than "conjugate vera," because the diameter represents that part of the sagittal mesial diameter of the pelvic inlet available for the passage of the fetus. I do not think there is any term we can use which would be more satisfactory than "obstetrical conjugate."

With regard to the term "diagonal conjugate," I do not see why it is necessary to change that because there is no confusion of thought whatever regarding it. There is only one diagonal conjugate described and I do not see the advantage of substituting another for it. But Dr. Bacon's chief suggestions relate to the terms "attitude," "presentation," "position" and "station." It seems to me, that if we have a clear understanding of attitude, presentation and position, and define them accurately, we cannot do very much better. Attitude, as Dr. Kolischer has stated, is the relation of the parts of fetus

to one another. There is no difficulty whatever about that.

Presentation is the relation of the long axis of the fetus to the long axis of the mother or uterus. The axis may coincide, either the head or breech being lowermost; they may be at right angles or oblique to one another. There are varieties of each of these. Thus when the head is lowermost, either the vertex, sinciput, face, occiput, or parietal region may be in relation to the brim.

There has been more confusion with regard to the definition of position. I believe that it should be considered as a relationship between some definite point on the presenting part of the fetus and a definite area of the pelvic brim. Berry Hart has criticised the method of denominating positions adopted by the Washington Congress because it is not quite uniform in its application. He says that the fetal denominator should be that part of the presenting portion which is the important leading part in the mechanism of labor. It is certainly advisable to employ such a system, especially for the purpose of establishing a comparison between the different mechanisms. In vertex presentation we take the occiput, and if we follow it right through labor it is easy to understand the movement of the whole head. In a face presentation, we use the chin to denominate position, because it is the chin which we follow; in the mechanism it is the chin which descends and rotates corresponding to the occiput in vertex cases.

When we come to breech presentations we find that the denominator does not correspond to that selected in the other presentations and it is this which Hart has particularly criticized. The breech has various positions, and they are denominated with reference to the sacrum. That is quite wrong, according to Hart, and I agree with him, because we do not follow the sacrum in studying the mechanism, but the anterior hip of the fetus. You are all familiar with what is called Hart's law, applying to the movement of internal rotation. A certain portion of the presenting part in descending, strikes the sacral segment of the pelvic floor on its own side, and owing to the resistance of the latter is pushed forward. Thus in an ordinary vertex presentation, the occiput is rotated. In a pelvic presentation it is the hip and not the sacrum which strikes the sacral segment and is rotated. Hence Hart has introduced a nomenclature which substitutes the hip for the sacrum in the denomination of the various positions of a pelvic presentation. I do not know how Hart's suggestions can be improved. If they were adopted uniformity would be established in the consideration of the various mechanisms of labor. Students could easily understand the descriptions. If we abolish the present nomenclature and attempt to describe all mechanisms in reference to the occiput, much confusion would be created.

With regard to Dr. Bacon's reference to "station" I think there is more to be said of a favorable nature. We are lax in description there. I have employed the terminology which Williams has employed, but it is not exact. There is, however, reason for this inexactness, namely,

the difficulty of measuring the diameters and circumference of the head, or of establishing accurately the relation between them and the pelvis in the early stages of labor.

Dr. Bacon (closing the discussion): I would like to say that I did not pretend this system to be entirely a new system of nomenclature.

I do not think the remarks of Dr. Holmes if applied to the paper that has been presented to-night are appropriate. There were absolutely no new suggestions offered, and it was simply with the idea of refining or improving the nomenclature that I brought the matter up. Everybody admits the necessity for improvement, and everybody admits the great differences between writers in this and other countries and between different writers in the same countries. It is that which is confusing. We can arrive at some results if we get clear ideas, and the essential thing is to get clear ideas.

Let me take up first the remarks of the last speaker. Objection has been made to the use of the word conjugate. We are sometimes in doubt in using the term conjugate or conjugata vera, whether the obstetrical or anatomical conjugate is meant. If everyone would use the term obstetrical conjugate, which would mean the minimal diameter, then we would have no reason to change, but because the term is not always used in the same sense it might perhaps be well to follow the French. However, it is not an essential point. As I stated, the three things that are most important are: (1) To carefully separate the concepts of presentation and position, (2) to use a uniform designator for position and (3) to introduce the term station to denote what has always been denoted less exactly by the term engagement.

I have become convinced myself and from the remarks that have been made this evening, I am strengthened in my conviction that the distinction between presentation and position is important. In some of the remarks it has been evident that the two terms are used without a clear separation. Of course, we all know what attitude means, and the two essential things in the mechanism of labor are attitude and position.

If we had terms to denote exactly the attitude, it would be perhaps desirable to do so but we have not got them. So we use the term presentation from which we at once infer the attitude; that is, we know the relation of the head to the trunk, as soon as we see that we have a vertical, a sincipital, or frontal presentation. We need to use the word presentation simply to show us the attitude of the child. Position may mean the relation of a part of the child to any part of the obstetrical canal. The relation of any one point, the back or occiput to this cylinder is position, so that in that sense we might say the relation of the vertex to the bottom of the cylinder is position. Strictly speaking, it is, and so when we say the child lies in a longitudinal position, we are quite accurate; that is, the vertex or the head points toward the bottom of the obstetrical cylinder. That is, strictly speaking, position, and that would include what we mean by presentation, but it is confusing in practice to use position in this extended sense, and so I say it is better

to leave that out and limit the definition of position. When we use the term presentation, there is implied what the relation of the fetal axis is to the maternal axis, what the relation of the presenting part is to the bottom of the obstetrical cylinder, so that we can leave out of the nomenclature what is not essential. When we come to define position, we can say it is the relation of the designating part of the child to the side of the obstetrical cylinder—front, back, or any of the quadrants. That is what position means, and I think we should restrict its meaning to that. When we do this, it is not necessary to talk about a directing point, as there is confusion in the use of the term direction point.

I think Dr. Kolischer, who, in general, agreed with me, misunderstood a little what Dr. De Lee said when he used the term. Still if he did, it was not surprising. The determining point to designate the denominator means the point which is in relation with the sides of the obstetrical cylinder, not the point that is in relation with the bottom of the cylinder. That is the part which is first touched, and so when we speak of a directing point as meaning the presenting part, we at once introduce confusion, and this Dr. Webster did.

Hart also introduces confusion in that way. Let us call the point that is first felt the presenting part, not the directing point. As physicians, all we want to know is that it is the presenting part; we do not say it is directed toward the right or left. If it is the presenting part, it is directed toward the bottom. It is confusing when you speak of a part that is directed down as the directing point that marks out position. If we separate these two ideas exactly, presentation and position, and define position as the relation of the part to the side of the obstetrical cylinder, it is better to use one point to denote position. We might say back. Veit uses only back; the dorsum is the denominator. Muefler does the same thing practically, and the back is desirable to use as the denominator when the head is not engaged, or when we do not know the position of the occiput. This term however is not quite as exact as the occiput. The head may be rotated at the neck and the occiput be directed in a different line from the middle of the back, and because the occiput is more important than the back, it is better when we can to use the occiput as the denominator with advanced station. All we want to do is to define position. Webster and Hart do not use the presenting part or the projecting point to define position in all cases.

How is it in cases of inclined attitude when the parietal bone is presenting? You do not say parietal bone position, but you should, if you follow that rule, just the same as you say the hip position instead of the sacrum. I do not see any reason for using different designators, because all we want to do is to determine the relation of the child to the side of the obstetrical cylinder. I assure you, that if you will make that experiment with students, you will find it simpler; they will grasp the relations better than when you use a number of different designators.

In regard to the use of the term station, it means that this nomenclature is an effort to put

into language something that can be easily recorded. You will all admit that the term engaged is somewhat indefinite. You cannot define what engagement means. Can you reach an agreement upon what engagement means? That is the difficulty. So if we introduce this term we can define it exactly, and it is simply to make the record on the sheet or board before the class complete. You can record your observations on the record sheet each time an examination is made. You can record the exact findings, and that simple requirement of a record always enables us to make more accurate observations.

There was one point made by Dr. De Lee that I want to speak of for a moment, because it is a common but erroneous statement that the head is engaged, according to my nomenclature it has entered the pelvis or it is in the pelvic cavity, if the bi-parietal diameter passing through the parietal tuberosities has passed the inlet. The circumference of the head which is encircled by the girdle of resistance for example the inlet or the vulva keeps on increasing until the suboccipital circumference is reached and the head has not passed through the inlet or out of the vulva until that suboccipital-frontal circumference has passed through. The plane of the suboccipital-frontal circumference is different from that of the circumference in which lies the biparietal diameter. The diameter has not so much bearing as the circumference in a perfectly plastic head. It is the big circumference that must pass before we can say that the head slips either into the pelvis or out of it. We know how it is at the vulva, that large circumference has to pass before the head is out.

Considerable has been said in regard to some points that I do not need to bring up at this time. Some of the discussion of the different attitudes is not appropriate to the subject of the nomenclature of position and station.

Robert T. Gilmore read a paper entitled *Catarrhal Enteritis in Women Simulating Pelvic Disease*, with report of cases; a discussion of which follows:

T. J. Watkins: I was much interested in the history of these cases, and particularly in those that suggested the existence of some pelvic disease. I feel that all of us at times have been negligent in not looking sufficiently after the general condition of our gynecological patients, and possibly paying too much attention to some minor pelvic difficulty. I feel very certain that disease in the intestine is frequently mistaken for some minor pelvic disease, and one sees quite often patients who are given for long periods of time pelvic treatments when the main difficulty is some general condition. It reminds me of a mistake a practitioner made in this line. The case was taken over by him by an internist. The patient had a relaxed vaginal outlet; she had a retroflexed uterus; she was exhausted. The patient was subjected to suspension of the uterus and to perineum. She was in the hospital for some time after which she returned home. Afterwards, her chief trouble was to be a tape worm. She was

with the vice president, Dr. S. J. Walker, in the chair. Minutes read and approved.

Dr. Rosa Engelmann reported a case of **Endocarditis, Pericarditis and Pulmonary Infarct**, with recovery.

Dr. Jas. G. Mastin read a paper on **Chorea**.
A Clinical Study and Report of Cases.

Both papers were freely discussed by Drs. Ryerson, Butler, Walker, Allen and Cotton.

The name of Dr. Bathena Coone was proposed for membership.

On motion the meeting adjourned.

Emma M. Moore, Official Reporter.

North Shore Medical Society.

Regular meetings are held the first Tuesday of each month at Hipple & Clark's Real Estate office, 907 Wilson ave., at 8 p. m. Membership 40.

Officers.

President..G. W. Green, 1296 E. Ravenswood Park
Vice President Dr. Young
Secretary.....Geo. E. Baxter, 1916 Evanston ave.

The Society held its regular monthly meeting Tuesday evening, January 5, 1904, in Hipple & Clark's Real Estate office, 907 Wilson Ave. The following papers were presented:

Appendicitis, Dr. G. W. Green.

The paper was discussed by Drs. Latham, Whitman, De Tarnowsky and Green.

The next paper was one of the series of the **Blood in Diseases**, the subject being **Leucocytosis in Disease**, by Dr. R. E. Green.

Discussion by Drs. Latham, Whitman, McClannahan, Baxter, G. W. Green and R. E. Green.

G. W. Green was unanimously elected chairman of this section to serve until the next annual election.

The Northwest Branch.

Regular meetings are held the first Friday of each month at 8 p. m., at Schoenhofen Hall Restaurant, cor. Milwaukee and Ashland avenues. Membership —.

Officers.

President.....M. H. Luken, 826 N. Irving ave.
Vice President.....Karl F. M. Sandberg,
684 N. California ave.
Secretary.....Louis J. Pritzker, 418 W. Division
Treasurer.....C. F. Roan, 740 W. North ave.
Councillor.....E. C. Seufert, 831 Milwaukee ave.

The January meeting of the Northwest Branch of the Chicago Medical Society should have occurred on Friday, January 1, 1904, but owing to that day being a holiday no meeting was held.

The next regular monthly meeting will take place on Friday, February 5th, 1904, at 8:30 p. m., at the Schoenhofen hall restaurant, when the following program will be rendered:

1. X-Ray Therapy in Skin Diseases, E. A. Fishkin.

2. The Value of Radio-Therapy in Pulmonary Tuberculosis, Karl Sandberg.

Chicago Neurological Society.

Regular meetings are held the first Thursday of each month from September to June, at 8 p. m. Membership 30.

Officers.

PresidentSidney Kuh
Vice-President.....O. L. Nix
Secretary-Treasurer.....L. H. Mettler
Corresponding Secretary.....C. H. Lodor
Councillor.....Archibald Church

At the annual meeting held January 7th, officers as above given were elected.

SYNOPSIS OF THE MEETING OF THE JUDICIAL COUNCIL.

The Council met at its regular quarterly meeting in Chicago on January 7th with all the Councilors present; also Dr. Kreider by invitation.

The question of card index was referred back to its committee as it requires further time in which to make a satisfactory report.

Chairman Ensign presented the following reply to the question of eligibility of admission to membership in the local society. The sentiments therein expressed were concurred in by a unanimous vote of the Council. It therefore becomes the guide for future reference.

" * * * The questions of ethical character concerning Dr. ———, after an informal consideration, were referred to the Councilor of the second district for response. Therefore I may say:

(a) That the matter of judging of the ethical or other qualifications for membership lies in the hands of each component or county medical society. See Sec. 5, Chapt. 10. By-Laws.

(b) Appeal from the decision of any such society may be taken first to the Council and finally to the House of Delegates. See Sec. 6, Chapt. 10. By-Laws.

(c) By virtue of such authority as may be given the Councilor by Sec. 2, Chapt. 8. By-Laws, I may advise:

That in passing upon applications for membership, a careful consideration be had of Sec. 7, Chapt. 2 "Principles of Medical Ethics" of the A. M. A. (see page 240 current vol. Illinois Medical Journal) and I may further venture to suggest that it might not be amiss for each member of the society to consider some such questions as the following:

1. Will the Therapeutic Gazette, or any other medical publication, afford each member of the society, or of the medical profession of the county, whether he does or does not "permit any spread or show in heralding the benefit of his work," without personal solicitation or remuneration either directly or indirectly, as much space to exploit his own surroundings and the work he has done, is doing or is making preparations to do, as shown by the documents of Dr. ——— submitted?

2. If every member of the society should herald his own affairs or seek to attract especial attention through the public or medical press to a like extent, what place would remain for

the legitimate, unassuming, self-respecting, yet equally qualified and reputable practitioner who proclaims no superior attainments, experience or facilities over his fellows; and especially, when to the foregoing may be added secret methods or remedies?

The simple statement of a specialty, as in the case of Dr. ———, can afford little if any objection, but a medical society can bring no discredit upon itself or the medical profession, which gives itself the benefit of any doubt and shuns an alliance with that which is questionable, or does not allow in one member business or commercial methods, which if applied by each and all of its membership, would be likely to bring contempt upon the medical profession of any locality. * * *

Very truly yours,

Wm. O. Ensign,

Councilor 2d District."

The secretary made an informal report of those physicians who are as yet members of the American Medical Association without previously identifying themselves with the local society. The secretary was instructed to furnish a copy of this list to the Councilors.

The late supplementary report of the State Board of Health was referred to the Editor of the Journal to make note of.

The Committee on Conference with the State Board of Health made a very voluminous written report, consisting of written statements by Drs. Webster and Egan, as well as a lengthy report of the work done by the Committee. After the reading of the same Drs. Kreider, Black and Ingals were granted the privilege of making a statement to the Council discussing some of the subjects contained in the report. After a full and free discussion the said committee presented the following resolutions which were adopted unanimously:

Whereas, There exists a misunderstanding between the State Board of Health and the Councilors of the Illinois State Medical Society arising from certain omissions from publications of discussions together with criticisms contained in the Illinois Medical Journal. Therefore be it

Resolved, That with respect to the former that it is sufficient to record it as an effort on the part of the Councilors to obviate further misunderstanding.

Resolved, That with respect to the latter the Councilors wish to disown any intentional reflections on the personal reputation or character while indulging in legitimate criticism and as an earnest of their feelings in this matter respectfully beg to call the attention of those at any time subjected to any such strictures to the liberty of appealing to our Journal columns for opportunity for defense.

Resolved, finally that we deprecate all reflections of a personal character on the members of the State Board of Health and urge their hearty co-operation in all matters pertaining to the elevation of the practice of medicine in the great State of Illinois.

Here Editor Kreider submitted a part of the proceedings of the County Medical Society in which the State Board of Health was criticised.

An inquiry from Drs. Webster and Egan, relative to the authority of the editor of the Journal was presented and referred to the Chairman for investigation and reply.

It was moved, seconded and carried that that portion of the proceedings reported by the County Medical Society criticising the State Board of Health, be cut out.

The Committee on Medical Defense by Dr. Harris, its chairman, reports that the said committee recommends that the State Society take up the question as it is feasible and advisable and will present full plans at next meeting of the Council for the operation of same. Report was accepted.

The application of the Fox River Valley Medical Association to be recognized as the component society for Kane and McHenry counties under the name and title of the Fox River Valley Medical Association was approved upon condition that the charter now held by said association be surrendered.

The applications of the following county medical societies to be recognized as component societies were approved unanimously and the secretary was ordered to issue charters to the same:

Effingham, Logan, Mason, Clinton, Clark, Putnam and Wayne Counties.

The following were ordered approved conditionally:

Jasper County.

Lawrence County.

Brown County.

It was moved and carried that the report of the Committee on Medical Legislation after revision be published.

After a somewhat lengthy discussion as to the management of the Journal in general, at 5 P. M., the Council adjourned to meet in Bloomington on the first Thursday of April.

BOOK NOTICE.

Illinois State Board of Health. Report on Medical Education and Official Register of Legally Qualified Physicians, 1903. Embracing Medical Practice in Illinois, Medical Colleges in Illinois and Faculties, Medical Societies in Illinois and Officers, Pension Examining Boards in Illinois, Requirements for Practice in the United States, Medical Colleges in the United States, and an Official Register of Physicians. Springfield: Illinois State Register. 1903.

The Illinois State Board of Health has recently published its Report on Medical Education and Official Registration of Legally Qualified Physicians. It has included a number of valuable facts in regard to medical colleges and societies in Illinois and brief statements of the requirements for practice in the various states and territories brought up to date. The opinions obtained from attorney-general Hamlin in regard to the medical practice laws and other subjects are a valuable feature of the report.

The Secretary has recently added to this report a supplement containing the changes of address, deaths and corrections and also a list of certificates issued during November and December, 1903. There is also a list of medical societies in the State, the officers and time of meeting of the same.

Death of Dr. Edmund Andrews of Chicago.

By the sudden and unexpected death of Dr. Edmund Andrews on the twenty-second of January, 1904, the Illinois State Medical Society and the profession generally lost one of its oldest and most eminent practitioners and teachers of surgery. He was born in Putney, Vermont, April 22, 1824. During his childhood the family moved to the central part of New York, and when at the age of 17 years, they moved to Michigan. Both in New York and in Michigan the youth was chiefly occupied in doing farm work during the summers and attending school winters, and prosecuted his studies with such diligence that he was able to enter the Sophomore class of the University of Michigan and graduate A. B. in 1849. In the University he became a classmate of the late Dr. Hosmer A. Johnson, resulting in a mutual attachment that has ended only with their lives. During his University course Dr. Andrews developed a strong predilection for the natural sciences and mathematics, and at its close he entered the office of Dr. Zina Pitcher of Detroit as a student of medicine. For his medical college instruction he returned to the then recently organized medical department of the University of Michigan at Ann Arbor, from which he received the degree of M. D. in 1852, and the degree of A. M., and was also appointed Demonstrator of Anatomy. In addition to his duties as Demonstrator of Anatomy, he gave lectures on comparative anatomy, edited the *Peninsular Journal of Medicine and Collateral Sciences*, and was one of the most active and efficient organizers of the Michigan State Medical Society in 1853.

In 1855 he was offered the position of lecturer on Comparative Anatomy and Demonstrator in Rush Medical College, which he accepted and changed his residence to Chicago. He discharged the duties of his new position with his accustomed promptness and fidelity. But his sturdy independence of thought and action, and his laudable ambition to gain a fair general surgical practice rendered him uncongenial to the president of that college, and he resigned at the end of his first year of service.

He however, continued his residence here and not only devoted his time and energies to the practice of his profession but he studied diligently the geology, and natural history of Chicago and all the country surrounding it and at the same time he united with Robert Kennicut and a few others in organizing the Chicago Academy of Natural Sciences. He served as its president several years and sustained it through all its vicissitudes of adversity and prosperity until his death. At the close of the annual college term of 1858-9, Dr. H. A. Johnson resigned his position as a member of the faculty of Rush Medical College. In the mean time a new University had been organized in Chicago under the name of Lind University, but since known as Lake Forest University, and the board of trustees being desirous of a medical department, authorized Drs. Edmund Andrews, H. A. Johnson, R. N. Isham, and David Rutter, to organize said department on such basis as they might deem best for both the profession and the com-

munity. The physicians just named knowing that Dr. N. S. Davis, professor of the Principles and Practice of Medicine and of Clinical Medicine in Rush Medical College had been for ten years urging the faculty to adopt a longer annual college term, a graded curriculum of medical studies, a better standard of preliminary education before commencing the study of medicine, and at least one year of hospital clinical instruction, decided at a consultation on the evening of March 12, 1859, to invite him and Dr. W. H. Byford, professor of Obstetrics and Diseases of Women, to join them in organizing the Medical Department of Lind University on the basis just named.

After full consideration and fair notice to all parties interested the invitation was accepted, and Drs. Davis and Byford took the same chairs in the new school they had been filling in Rush Medical College, and to Dr. Edmund Andrews was assigned the chair of Principles and Practice of Surgery and Clinical Surgery, which he continued to fill with a steadiness of purpose, a tireless industry, and a fidelity and skill rarely equalled, for forty years. The other chairs were filled with able men and thus was commenced the first medical school in this country, that has continued to be the practical pioneer of the complete revolution in our system of medical college instruction which took place during the last half of the nineteenth century.

Dr. Andrews was also added to the surgical staff of the Mercy Hospital which afforded him an excellent field for clinical instruction during his whole professional career, and to the continued growth and prosperity of which, he contributed largely by his prompt and skillful service for all who were assigned to his care, whether rich or poor.

Soon after the commencement of the Civil war of 1861 he was made surgeon of the First Regiment of Illinois Light Artillery, and was in active field service under Generals Grant and Sherman for one year, when with somewhat impaired health he was permitted to resign and return to his former college and hospital duties, bringing with him the high commendations of his skill and fidelity while in the military service. In the summer of 1867 he visited the leading hospitals of Europe giving much attention to the use of antiseptics, the comparative safety of different general anaesthetics, and the subject of licensing of houses of prostitution as practiced in Paris and some other cities on that side of the Atlantic ocean. After his return he became a leader in the use of antiseptics in surgical practice and he soon published two papers that attracted much attention. One embraced a very large collection of cases of general anaesthesia from ether and chloroform and the ratio of mortality in each. The other was a thorough exposition of the practical results of attempts to limit the spread of syphilitic diseases by licensing houses of prostitution and subjecting their inmates to stated medical examinations and if necessary treatment. His conclusions were that the system was productive of far more evil than good.

Several years later he published a valuable monograph on rectal and anal surgery; and

throughout his active career he was a frequent contributor to the pages of periodical medical literature, and to the transactions of the various medical and scientific societies of which he was a member.

He was a clear, logical thinker; a terse, vigorous writer and lecturer always commanding the attention of his audience, yet of a genial and kindly disposition; ever ready to cheer the

despondent, and make his own home circle happy.

From his youth he was an exemplary member of the Presbyterian church. He neither used alcoholic drinks or tobacco, nor bowed before the shrine of wealth or fashion; but was an excellent example of good citizenship and of steadfast friendship unmingled with guile.

N. S. Davis.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

INDEX TO ADVERTISEMENTS.

PAGE.	PAGE.
Abbott Alkaloidal Co.....VIII	Illinois State Journal Co.....XVI
Allison, W. D. Co.....IX	Illinois School of Electro-Therapeutics.....V
American X-Ray Co.....IV	Illinois Medical College.....XVI
Antikamnia Chemical Co.....XIII	Jerseyville Sanitarium.....IV
Armour & Co.....X	Kress & Owen Co.....XIX
Broadwell, Stuart.....XV	Maplewood Sanitarium.....XVIII
Breitenbach, M. J. & Co.....Cover	Meyer & Co., C. F.....XIX
Broughton's Sanitarium.....IX	Milwaukee Sanitarium.....XIV
Colegrove, E. H. & Co., Books.....XIV	N. Y. Policlinic.....IV
College of Phy. & Sur., Chicago.....XI	North Western University Med. School.....IV
Chicago Eye, Ear, Nose & Throat College.....XVIII	Polk's Medical Register.....XVI
Chicago Policlinic & Hospital.....Cover	Post Graduate Medical School of Chicago.....XVIII
Cincinnati Sanitarium.....XVII	Presbyterian Hospital of Chicago.....XVIII
Columbus Medical Laboratory.....XVI	Purdue Fredrick Co.....Cover
Decatur Drug Co.....XV	Ransom, Penn. W.....XIV
Denver Chemical Mfg. Co.....VII	Rush Medical College.....XI
Dodds, R. N.....XVI	Sharp & Smith.....XV
Fairchild Bros. & Foster.....Cover	Springfield Mattress Co.....XVII
Fawshawe Handecker Apron Co.....XVIII	Tilden Co.....XI
Fellows Syr. Hypophos. Co.....Cover	Truax Green & Co.....XV
Finsen Light Inst., Chicago.....V	Victor Electric Co.....VIII
Friedlander & Co.....XIII	Wagner R. V. & Co.....XII
Gardner Barada Co.....Cover	Waukesha Springs Sanitarium.....XVII
Illinois Central R. R. Co.....XIV	Whitford, Wm., Medical Stenographer.....XVI

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Febrisol Liquid (Tilden's.)

Is it not true that nine-tenths of the cases of illness coming under the care of a physician are characterized by fever and pain? Is it therefore not obvious that much of the success that comes to medical men is owing to the more or less prompt relief given to these conditions? From this standpoint Febrisol Liquid (Tilden's) should command the special respect of the medical profession as a certain means of making friends, money and reputation. Febrisol Liquid accomplishes these results because of its antipyretic, antiphlogistic and analgesic action, which is unattended with depressant effects. And most important to ob-

serve, it causes no drug habit, and does not like opium, wreck the patient's mind while he is made oblivious of pain. Febrisol Liquid relieves the pain by reducing the inflammation which is the cause thereof. It sets the circulation at rest by calming the nerve centers in the medulla and through its influence upon the vaso-motor nerves it opens the flood gates of the skin producing gentle perspiration and thus cools the blood.

Experience amply shows that there is no more safe, efficient, thoroughly reliable remedy in such conditions than Febrisol Liquid (Tilden's.)

Cough and Restlessness in Pneumonia.

Dr. W. J. Parker, truthfully states in a recent medical publication, that the season for pneumonia is here and it may be of interest to our readers to know that he has found an excellent remedy for the cough and restlessness which are such distressing symptoms of this dreadful malady in antikamnia and heroin tablets. Each of these tablets contain five grains of antikamnia and one-twelfth grain heroin hydrochloride and the dosage is one tablet every two or three hours according to the exigencies of the case, or at the discretion of the attending physician. We may also add, that Professor Uriel S. Boone of The College of Physicians and Surgeons, St. Louis, reports most satisfactory results with this remedy in pneumonia, bronchitis and la grippe, particularly in relieving the accompanying spasmodic coughs and muscular pain.

Dr. Colin Campbell, Southport, Eng., L.C.R.P., M.C.R.S., writes in the Medical Press and Circulator, London, Eng., October 7, 1903.

Pleurisy.—Dr. B. was under my care last winter suffering from a pulmonary cavity. He had previously two or three intercurrent attacks of pleurisy, which I again found present on December 7, 1902, accompanied by severe pain over the cavity, and a temperature of 103 degrees. His previous attacks had occurred at his home, where careful poulticing was practicable, but in apartments this was unsatisfactory, and so it occurred to me to try Antiphlogistine.

The material was warmed and "trowelled" on for many inches around the pleuritic center, then covered with non-absorbent lint and Jaconet.

The result was remarkable; the pain disappeared within an hour, and the high temperature within two days.

Many advantages over poulticing were noticed by the patient; facility of application, no unendurable heat, rapid relief from pain, its adhesiveness rendered movement possible without tight bandaging or the alternative sudden influx of cold air which follows the separation of a poultice from the skin.

The Pharmaceutical Era of December 31, 1903, has the following:

Pretty Christmas Party to Employees.

One of the pleasantest events of the holiday season in the drug circles was a buffet luncheon given on last Thursday by Fairchild Bros. & Foster to their employees. It was a complete surprise to the guests who numbered about 140. A

big table in the work room on the fourth floor at 74 Laight street fairly groaned with all the good things prepared by Maresi's chefs, and was decorated with potted plants presented to members of the firm by the members of the office staff.

B. T. Fairchild welcomed the guests to the "Christmas party," as it was called, and E. W. Dusenberry responded, after which Messrs. S. W. Fairchild and M. G. Foster also spoke. There was music during and after luncheon, which began at 12:30, and at three o'clock the annual presents in gold were distributed among the employees, and the rest of the day was declared a holiday.

Chilblains to many will appear a trifling matter, but as one whose school days in winter were rendered miserable by them, I can assert that they are most maddening. Last winter my daughter, age 11, suffered from them severely. Each time Antiphlogistine was applied, the redness and intolerable itching disappeared in a night. I have tried remedies innumerable with no such result.

Journal of Infectious Diseases.

Chicago, January 6.—The first issue of the Journal of Infectious Diseases, the new scientific publication endowed by Mr. and Mrs. Harold F. McCormick, has made its appearance at the University of Chicago. The Journal has been established in connection with the memorial institute for infectious diseases, founded by Mr. and Mrs. McCormick in memory of their son, John Rockefeller McCormick, who died of scarlet fever.

The new magazine is devoted to the publication of original investigations dealing with the general phenomena causes and prevention of infectious diseases, both known and unknown origin. The publication, costing \$15,000 yearly, it is estimated that the endowment is about \$375,000.

"Many a man is today worrying over a case or two of Pneumonia, Pleurisy, or Capillary Bronchitis, whose troubles would flit away like mist did he but know enough to put his patient into a jacket of Antiphlogistine."—Medical Summary, November, 1902.

The Medical Fortnightly of which our talented member, Dr. F. P. Norbury of Jacksonville is editor, starts its twenty-fifth volume with a new and improved dress and every evidence of a prosperous existence.

Elixir Maltopepsine with Glycerophosphates

(Tilden's)

RESPIRAZONE

(Tilden's)

ANTI-ASTHMATIC. Useful in all Spasmodic Respiratory Diseases as Asthma, Hay Fever, Croup, Laryngismus Stridulus, Whooping Cough, Etc.

ELIXIR

Iodo Bromide Calc. Comp.
(Tilden's)

THE foremost alternative. Superior in all Strumous, Syphilitic and Cutaneous Diseases. Beware of substitutes. Get the genuine and get results.

An ideal digestive and tissue constructive tonic of universal applicability in all wasting diseases and nervous disorders, with faulty digestion, stomachic or intestinal. Further assimilation and growth of bony tissue. Each fluid dram contains: Glycerophosphate Calcium, gr. 1; Glycerophosphate Soda, grs. 2; Glycerophosphate Iron, grs. $\frac{3}{4}$; Glycerophosphate Manganese, gr. $\frac{1}{2}$; Glycerophosphate Strychnine, gr. $\frac{1}{10}$; Maltopepsine, grs. 10. In dram doses is economic to dispense—very prompt results.

NARKOGEN

(Tilden's)

HYPNOTIC, Anodyne Antispasmodic.

FORMULA:

Chloral Hydrate . . . grs. x
Potass.-brom. . . grs. x
Hyoscine hydrobromate, grs. $\frac{1}{2}$
Narkine (Tilden's) . . . grs. ss

FIRWEIN

(Tilden's)

AN Alternative Remedy for Acute and Chronic Diseases of Throat, Lungs and Mucous Membranes in general.

Samples Sent to Physicians on Application.

Prepared Expressly for Physicians' Prescriptions by

THE TILDEN COMPANY

Manufacturing Pharmacists

New Lebanon, N. Y.



St. Louis, Missouri

No Physician can afford to be indifferent regarding the accurate filling of his prescription.

RUSH MEDICAL COLLEGE

In Affiliation with the University of Chicago

Rush Medical College and the University of Chicago offer to students of either sex a four years' course leading to the degree of M. D.

At the University of Chicago.—The first two years are given at the University in the spacious Hull Biological Laboratories and the Kent Chemical Laboratory. Instruction is given in Anatomy, both gross and microscopic, Neurology, Embryology, Physiology, Physiological Chemistry, Pharmacology, Chemistry, Physics, Bacteriology and Pathology.

Six Years' Course for the Degrees of B. S. and M. D.—The work of the senior College (junior and senior years) at the University is elective, and the student may elect for the last two years of the course leading to the degree of B. S., work in the sciences fundamental to medicine, which fully covers the work of the first two years of the medical curriculum; at least three majors of Philosophy and History must be taken in order to complete the course for the degree of B. S.; thus the two degrees may be secured in six years. Credits are accepted for similar work successfully completed at other recognized colleges.

At Rush Medical College.—Only the last two or clinical years of the medical course are given at Rush Medical College. The Central Free Dispensary and Presbyterian Hospital, together with the Cook County Hospital, West Side Hebrew Dispensary and other hospitals furnish abundant clinical facilities for practical work in Medicine, Surgery, Obstetrics, and the several special clinical branches of medicine.

The Quarterly System.—The college year is divided into quarters, beginning respectively June 19th, and on the first day of October, January and April. The requirements for admission for the session beginning June 19, 1902, comprise the completion of a four years' high school course and one year in college; in lieu of the latter, however, six majors (two quarters) of work at the University of Chicago will be accepted. Students who have completed a four years' high school course but have had no work in a college or university, are especially recommended to enter at the beginning of the Summer quarter, June 19th, 1902. Full information will be furnished on application to

Rush Medical College or The University of Chicago, Chicago, Ill.

Please mention the Journal when writing to advertisers.

University of Illinois

College of Physicians and Surgeons, of Chicago

(Opposite Cook County Hospital.)

Collegiate year begins October 1st, 1903.

Length of term 8 months.



NEW BUILDINGS OF COLLEGE.

Unsurpassed clinical and laboratory advantages.

Attendance: 1895-1896.....	235	1899-1900.....	579
1896-1897.....	308	1900-1901.....	675
1897-1898.....	406	1901-1902.....	705
1888-1899.....	514		

Persons interested in Medical Education are invited to investigate this school.

Address; DR. FRANK B. EARLE, Secretary, Congress and Honore Sts., CHICAGO.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

New Series, Vol. V. }
No. 10. }

Springfield, Ill., March, 1904.

{ SUBSCRIPTION
\$3.00 A YEAR. }

SPERMATURIA.*

BY ARTHUR R. ELLIOTT, M. D., CHICAGO.

Professor of Medicine, Post-Graduate
Medical School.

The object of this paper is to direct attention to a factor, which in the experience of the writer, has proved a frequent confusing element in testing for albumin in the urine, viz., the presence of seminal elements in the urine. Spermaturia, a term first used by Grünfeld, may be applied to this condition.

A review of one thousand carefully and fully recorded analyses of male urines, taken from my records, reveals the fact that seminal elements were present in fifty-six instances, in all of which spermatozoa were features of the microscopic sediment. In forty-four of these fifty-six cases, the albuminous reaction was obtained. In the remaining twelve no reaction for albumin was present, but without exception in these cases, spermatozoa were found in very small numbers and seemed from their infrequency to be accidental bodies. In twenty of the forty-four cases in which distinct reactions for albumin were obtained, no other morbid elements such as blood, pus, or casts, which might be responsible for the presence of the albumin, were found. In the remaining twenty-four cases, casts, pus or blood were present and to these might be attributed more fairly than to the spermatoc elements, the causation of the accompanying albuminuria. As the outcome of this investigation, twenty cases of albuminuria varying in amount from a trace to one per cent bulk of moist precipitate were attributable to the presence of seminal elements, a ratio of two per cent. It would appear from this that these bodies in the urine are frequently the cause of false albuminuria.

My attention having been directed to the subject by interesting clinical experiences, an investigation of the literature entirely failed

to reveal to me any reference to the presence of seminal elements in the urine, as a possible confusing factor in testing for albumin, and curiously enough, I was unable to discover any table of reactions which these bodies, when present in pathologic amounts might occasion. No accurate chemical analysis of human semen is recorded, the only one forthcoming being the old analysis of Vauquelin and Kolliker, which is as follows:

Water	90
Albuminous material, extractives, ethereal extract	6
Mineral material	4

According to Milscher, the fundamental constituent of semen is nuclein. Globulin and serum albumin have been found in semen and Posner asserts that albumose is also present.

With these spare data the chemistry of human semen has evidently been dismissed by physiologists. My investigation of the subject has not been concerned with the chemistry of semen, but with the reactions which result from its presence in the urine.

Normal semen, as is well known, is a composite body, consisting of a mixture of the secretion of the testicles, the seminal vesicles, and the accessory glands, (the prostate, Cowper's glands and the glands of the urethral mucous membrane). According to Ultzmann, the fluid portion of the semen is made up of the combined secretion of the seminal vesicles and accessory glands, the testicles furnishing only the spermatozoa. Besides spermatozoa, the microscope shows spermatoc cells, epithelium from the prostate and urethra and molecular detritus.

Under certain physiologic conditions, seminal elements may find their way into the urine in numbers sufficient to give rise to distinct reactions for albumin. Thus in the first urine passed after coitus and pollutions, they are found in considerable amounts. Such urines frequently appear hazy by trans-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

mitted light and upon standing a distinct nebecula separates out. This physiologic spermaturia may appear, at first glance, to have little clinical importance. It has, however, been my experience a number of times to encounter distinct albuminuria due to these bodies in urine submitted for analysis, which had been voided upon rising in the morning, coitus after retiring the previous evening or nocturnal pollution being the undoubted cause. A professional colleague who makes many analyses for life insurance companies informs me that he has found spermatic albuminuria a frequent confusing factor, especially in urines submitted on Sunday morning, that being the time, one may infer, when sexual coitus is indulged in by the week day workers. A less important and a doubtful physiologic cause for the presence of these elements in the urine is extrusion of semen during defecation. Certain authors (Pickford, Davy Lewin) consider that straining at stool may be sufficient cause to produce the escape of semen from the seminal vesicles. Curschmann and Furbringer maintain that although some isolated spermatozoa may under physiologic conditions be forced into the urethra during efforts at defecation, the passage of a considerable quantity of semen is only possible when insufficiency of the ejaculatory duct exists. No value attaches to this accidental spermatorrhoea for it is necessary that these elements be present in considerable amount to give rise to albuminuria.

A great variety of pathologic conditions may bring about the presence of seminal matter in the urine. Certain organic and functional perversions of the sexual apparatus are the most frequent etiologic factors. Of local anatomical affections the most important are chronic inflammation of the prostatic urethra and of the ejaculatory duct, together with dilatation and atony of the same. These conditions are most frequently consequent upon gonorrhoea, and are the predominant factors in morbid loss of semen during micturition and defecation. Certain other affections of the lower urinary tract may occasionally cause seminal leakage. Some of these are, urethral stricture, prostatitis, seminal vesiculitis, vesical calculus, habitual catheterism.

Prostatic hypertrophy constitutes a very frequent cause of spermaturia in men of later middle and advanced life. In such case the enlargement of the gland has rendered the ejaculatory duct incompetent. Certain rectal diseases may indirectly cause seminal loss. Among these are hemorrhoids, fissure, oxyuris. Most important is the loss of semen noted in cases of true spermatorrhoea due to venereal excesses or masturbation, when spermatozoa may be found in the urine almost constantly. More especially is this escape of seminal fluid to be noted during and immediately following defecation. The morning urine, except when a pollution has occurred during the night, is more apt to be clear of these bodies than the urine of the day, the upright position and especially walking, jolting, riding, etc., having the effect of increasing the seminal leakage.

Certain affections of the central nervous system may be concerned in the production of morbid loss of semen. Among these may be mentioned *tabes dorsalis*, traumatic lesions of the spine and myelitis. Furbringer mentions having observed it in hysterical neurasthenia and also in cases of spinal neurasthenia during violent exercise. The urine voided after or during epileptic seizures is found pretty constantly to contain seminal elements.

As instances of the clinical confusion which may arise from the presence of these bodies, I submit the three following cases, which are chosen from a number in my case records as being most typical and illustrative.

Case 1. A young man twenty-four years of age, in good general health and leading an active life as canvassing agent, was referred to me in January, 1903, by Dr. Robert H. Babcock, of Chicago. Patient's application for life insurance, one week previous to consultation, had been refused on account of albuminuria, several urine analyses having been made. Four months previous to insurance examination, the patient had an acute attack of gonorrhoeal urethritis, the discharge lasting eight weeks, with deep urethral symptoms toward the end. During the two months interval that had elapsed between cessation of urethral symptoms and the examination referred to, there had been no discharge and

patient had considered himself cured and had resumed normal sexual relations without apparent detriment to himself or wife. He has noticed on several occasions the extrusion of a drop of mucoid material during defecation, but this circumstance had caused him no concern. Patient is temperate in the use of alcohol, but is a heavy smoker of cigarettes. General physical examination failed to reveal anything abnormal. A single specimen of urine analysed at the time of first consultation yielded a free reaction for albumin. No casts could be found but the sediment contained great numbers of spermatozoa. A twenty-four hour collection of urine submitted two days later, yielded the following results: Total quantity twenty-four ounces; specific gravity, 1.028, urea 3.4 per cent; no sugar; albumin 0.25 per cent bulk; myriads of spermatozoa and many spermatic cells, but no casts. A third specimen displayed practically the same characteristics. Patient was directed to submit three specimens, one to be collected before rising in the morning, one after breakfast, and the daily stool, and one during the active portion of the day. Number one of these urines proved to be albumin-free, and contained no spermatozoa; number two contained appreciable amounts of albumin and large numbers of spermatozoa, and number three also gave plain reaction for albumin and contained seminal bodies. This case seemed to be a pure case of spermaturia, due to incompetence of the ejaculatory duct, sequential to involvement of the deep urethra, defecation and the activities of the day causing a leakage of seminal elements into the urethra. The kidneys were sound and the albuminuria false.

Case 2. For this case I am indebted to the courtesy of my friend and associate, Dr. Walter A. Jaquith. Patient, a salesman by occupation, aged twenty-two years, had been examined for life insurance, December, 1902, and reported a good risk, except for albuminuria on account of which acceptance was withheld. Patient was first observed January 16, 1903. Physical examination failed to reveal any organic defect. Patient was highly nervous and complained of frequent nocturnal emissions occurring several times

weekly, and often twice in one night. The urine was light in color, alkaline and turbid from precipitation of earthy phosphates. Distinct reaction for albumin was present and the microscope showed great numbers of spermatozoa and mucous cylindroids. No casts, renal cells, or pus, were present. This was a case of true spermatorrhoea, causing false albuminuria.

Case 3. S. W., age forty, a sexual neurasthenic; has been under occasional observation for several years. Patient is a chronic dyspeptic and habitually constipated. Being an office man he leads an indoor life and during the period of my observation has been under treatment at various times for sexual weakness. Many specimens of urine have been examined, several of which have proved to be absolutely free of morbid elements; other specimens, including the last three submitted for analysis, have contained distinct amounts of an albuminous body. Large numbers of spermatozoa have been discovered in the sediment of each of the albuminous urines and to these bodies has been attributed the albuminuria. Examination reveals a slightly enlarged and tender prostate; no venereal history can be obtained.

Differential testing, the details of which it is not necessary to describe, reveals the fact that several albuminous bodies contribute to the reactions which seminal elements give rise to in the urine. Both coagulable and non-coagulable albumins are present. They consist of traces of serum albumin, serum globulin, nucleo-albumin (mucin) and distinct reaction for peptone is found in the filtrate after saturation of the urine with ammonium sulphate, by the aid of heat. No reactions for albumoses could be obtained.

Of more practical clinical interest is the manner in which urine containing these bodies behaves to the albumin tests in common use. With heat, heat and nitric acid, heat and acetic acid, and heat and acetic acid after previous treatment of the urine with saturated sodium chloride solution—a distinct, although not heavy albuminous cloud results. Heller's nitric acid contact method yields a faint reaction, much less distinct than that produced by any of the foregoing

methods. The potassium ferrocyanide test gives a distinct reaction which is not affected by heat. This reaction does not develop so quickly as with ordinary urinary albumin, but only after a momentary interval and becomes more pronounced after the test has stood for a few minutes; moreover the albuminous cloud does not precipitate in the test tube on standing and only with the greatest difficulty is it thrown down by centrifugal precipitation.

The potassio-mercuric-iodide and picric acid tests give plain reactions which are partially dissolved by heat, to reappear again when the solution becomes cold.

The addition of strong acetic acid to the diluted urine yields the mucin reaction as does also Almen's tannin test used in conjunction with saturated salt solution.

It will be seen from the foregoing observations that the reactions produced by the presence of seminal elements in the urine very closely resemble those produced by serum albumin and may easily prove a confusing element in albumin testing.

Discussion.

Frank Billings, Chicago: This very interesting subject illustrated by Dr. Elliott is of a good deal of clinical importance and also in the matter of prognosis in cases in which albuminuria is found. The doctor so fully covered that part of the subject that it is not necessary for me to add anything to what he has said, but I will say that an accidental spermatorrhoea may occur in the examination of a patient. At first it was confusing to me, but the use of the microscope always cleared it up. It has been my habit in examining new patients to make a rectal examination, and in man the spermatozoa are not infrequently carried into the bladder in that way. If you fail to have them void their urine before you make the rectal examination, you will frequently find spermatorrhoea. It may be a confusing point in the diagnosis, but it is easily cleared up by a careful examination of the urine as stated by Dr. Elliott.

I merely wanted to add that as another cause of the presence of spermatozoa in the urine and thus producing a false albuminuria.

Dr. Elliott, closing the discussion: I wish to thank Dr. Billings for this addition to the paper. I neglected to put that in and yet it is a circumstance which frequently came to my notice where a rectal examination formed a part of the routine examination that the urine may afterward contain spermatozoa and thus give an albuminous re-action. But the microscope will always clear this up. Unfortunately the routine urine examination does not always include a microscopic examination, and so in

two of the cases recorded a grave injustice may be done to the patient by a false interpretation of the findings.

A careful search of the literature for fifteen or twenty years, including a search of the authorities on urin-analysis, has failed absolutely to give me any information, or to contain any reference, clinically, to false albuminuria, which may be due to spermatozoa in the urine, or to a re-action which they give when present.

Dr. Griffiths: What was the outcome of the cases that were rejected for life insurance?

Dr. Elliott: I do not know. Every specimen of urine that I could obtain in which spermatozoa were found gave a re-action for albumen. I followed the patient for sometime and always had the same findings every time I examined the urine. But I lost track of the patients.

Dr. Mix: In the Boston Medical and Surgical Journal of 1880 or 1881 and 1882 is an article on this subject in which the point is made that the presence of spermatozoa in the urine always is associated with albuminuria. Of course, that is twenty years ago and our present day methods are vastly superior to those of twenty years ago.

NORMAL SALT SOLUTION IN SURGERY.*

BY F. E. WALLACE, M. D., MONMOUTH.

My only excuse for bringing this subject forward, is to emphasize its great value as a therapeutic agent and to urge its more general use.

It is surprising, that the use of saline infusion, a method so incomparably superior to all others, in the treatment of hemorrhage and shock, should meet with such restricted use among the general practicing physicians. It is not because of the lack of information on the subject, nor for more specific instructions as to its administration, that it is not more generally used, but rather, a lack of appreciation of its life saving qualities. Professor Loeb and Dr. Woods Hutchinson, and others, have given us a scientific basis for its use, so that, we as practitioners, have only to supply ourselves with the scanty paraphernalia needed, and a little knowledge, to make its use an almost daily one. The physiological effect is, almost immediate restoration of normal heart action, pulse volume and respiratory action. It is a powerful stimulant

*Read at 53d Annual Meeting, Chicago, May 30, 1903

to the cardiac ganglia and nerve centers. The skin, kidneys and intestinal functions are stimulated markedly and other organs are likewise affected. It is eliminated by the skin, lungs and intestines and quite markedly by the kidneys. Diuresis in a few hours is quite free and the action once established, appears to be a lasting one. It aids in eliminating the toxins and by stimulating phagocytosis. If peripheral resistance is lost by breakdown of the vaso-motor mechanism, as in fatal "shock," no amount of infusion can wholly restore pressure and death is inevitable. Its therapeutic applications are so numerous that, at best, I can but mention them, giving a few illustrative cases. Its more particular uses are for shock, hemorrhage and sepsis.

There are five different routes of administration; intra arterial (which is most unsafe), intra venous, subcutaneous, by rectum and through the peritoneum. I would advise the intra venous route, only in cases of great emergency. The rectal route can be used most frequently and in cases, in which, there is not the necessity for immediate action. The technic is about the same as for high enemas. In those cases in which we wish to see immediate effect and before we leave the patient, give it subcutaneously. A few words as to the method of giving rectal injections. This will apply to ordinary injections as well as to enemas. The patient should always lie on his back, with hips at least six inches higher than the body. The injection is made so slowly, as to occupy from 10 to 20 minutes and is arrested at short intervals, to allow rubbing of the abdomen. This is done by making deep and easy pressure, with palms and fingers, commencing as low down in left iliac fossa, as possible, and rubbing upward, slowly, over sigmoid and descending colon, then across transverse and down the ascending colon. This is repeated a number of times and the fluid is easily pushed ahead of the fingers. In this manner, as much as 2 or 3 quarts, if desired, may be used without inconveniencing the patient and we will have the satisfaction of knowing that the fluid will be retained a long time, in some cases hours. The longer retained, the more that is ab-

sorbed. Should there be intolerance a few drops of laudanum may be added.

The physiological solution is about 9-10 per cent. This is easily made by putting one drachm of common salt, in one pint of water; this is then thoroughly boiled. Heineck says that sodium chloride is not toxic and can be used in unlimited amount. Cushing modifies this statement and declares, that the pure sodium chloride solution alone may, in certain ways, be injurious from its toxic effects. He suggests a combination as follows:

Sodium chloride (Na cl).....	0.9
Calcium chloride (Ca cl).....	0.026
Potassium chloride (K cl)	0.01
Dis aqua	99.064

100:000

as a most nearly perfect solution. Certain manufacturing chemists have placed upon the market, somewhat similar solutions and tablets from which the proper strength solution is easily prepared.

When administering, the solution should be about 110 degrees F. If in an emergency our thermometer for the solution is not at hand, it can be tested on the skin of the arm. You can readily judge the proper temperature. It is hardly necessary to tell an up-to-date physician, that his instruments should be sterilized and that all precaution should be taken to do an aseptic injection. Subcutaneously it is not necessary to give large quantities, (that is 4 to 6 pints) as has been practiced, for an equally effective result can be obtained with a smaller quantity (such as 8 to 16 ounces). If necessary, this may be repeated every 4 to 8 hours. The larger quantity puts a severe strain on the kidneys. Dr. R. C. Coffey, of Portland, Ore., has recently devised an apparatus, in which a thermometer is placed near the needle, so that we can tell the exact temperature at which the solution enters the tissues. I would advise a good large needle and an ordinary bulb syringe to be carried in every emergency and obstetrical bag. With the bulb syringe, you can quickly introduce the proper amount and thus not allow your solution to become cold. Oftentimes the simpler things in nature, give us the best results and

in striving for things great we neglect the things simple, therefore, on account of its cheapness and simplicity do not think it worthless.

CASE REPORTS.

Typhoid Fever.—I have had good results from enemata given once to three times a day. In threatened collapse, in hyperpyrexia, the shock following hemorrhage, the restlessness and low delirium of typhoid, I have had remarkable improvement by subcutaneous injection. The temperature is lowered, the heart action increased in strength and the amount of urine increased. What other one remedy can give such results?

Summer Diarrhoea.—I have in mind several cases in which the temperature was subnormal, the exhaustion was extreme, cold sweat standing on the brow and very restless and pale, the cases showing great depletion of blood, and not far from collapse. Rectal injections were given, from which, all the symptoms shortly improved.

Abortion.—Two cases, in which the retained placenta had caused alarming hemorrhage. The woman so still and pale and pulseless, that if an occasional sigh did not reassure you, you might think that life had flown. Subcutaneous injections in each case, brought impulse to the wrist, a little color to the lips and twitching to the eyelids: brought life itself. Speedy recovery followed.

Premature Birth.—Caused from Uremic Poisoning. Saline enemata assisted in restoring this woman.

Appendicitis.—An operative case in which I had extreme difficulty in breaking up the adhesions and freeing the appendix. The patient was in collapse. Subcutaneous injection under the breasts, soon restored his equilibrium. I have used enemata also in chronic cases to relieve the pain and soreness.

Alcoholism.—You have seen these cases just on the verge of delirium tremens. The restlessness, the wild talk, the demand for relief, the fear of impending death or insanity. I believe you will have equally as good results from a subcutaneous injection as I have had. In one case the temperature fell from 105° to 99°.

In Abdominal Operations.—The salt solution may be left in the cavity, just sufficient as to not cause distention. This prevents shock, quenches thirst, expels the air and there is less likelihood of adhesions.

Vomiting.—From whatever cause, I have relieved some cases that would not yield to other remedies. Splendid results have been secured in the treatment of persistent vomiting of pregnancy, by the systematic injection, per rectum, of a pint, given 3 or 4 times a day. If necessary stop all liquid and solid food for several days, then begin with small quantities of food and while continuing the rectal injections, gradually increase until the necessary amount of food be taken. This method may avert the necessity of inducing abortion.

In Septic Cases.—Such as puerperal sepsis, peritonitis, and in general infections, remarkable effects followed the use of the normal salt solution. Results which could not be attributed to any other treatment.

Pelvic and Abdominal Pains.—Such as oophoritis, tenesmus, appendicitis, gastralgia, gall stones, hepatitis, and the many vague pains, I have greatly benefited by rectal injections.

Shock Following Accidents.—Of a crushing nature and where we wish a stronger pulse and better condition before operating, we can best secure, by the salt injection.

In Scantiness of Urine.—With threatened uremic symptoms, no measure will be so effective in bringing about diuresis, which when once established, is often extremely free and lasting. Caution however is needed here. If the kidneys fail to respond, it is useless. This is one place where we should use the smaller amount.

In Acute General Peritonitis.—With operation, flush out the peritoneal cavity with large quantities, 4 to 20 quarts and leave cavity filled without undue distention. Use 6 to 8 oz. per rectum every 4 to 8 hours afterward.

In Empyema.—Allow the solution at 100 degrees F. to run into the cavity as the pus escapes and thus prevent hemorrhage by too sudden relief of pressure, also to prevent sudden collapse of the walls. The cavity is

finally washed out thoroughly with the solution, a portion may be allowed to remain.

Used in Tetanus.—By venesection and withdrawal of poison laden blood and infusion of normal salt solution. I have used it in one case, but only by rectal injections and without venesection. It is used in some Mental Diseases and is especially useful in "Exhaustion Psychoses."

In Infantile Broncho-Pneumonia.—The injections are followed by an increase in the arterial tension, the heart is relieved, the temperature falls gradually or abruptly and all the natural emunctories seem to feel the whip. The action is explained by the fact that the injections stimulate phagocytosis.

In Skin Grafting.—It is far superior to any other solution for irrigating during the operation or dressings, because of its close resemblance to the composition of the blood. A case is reported in which a patient, after taking 8 gr. of Morphine sulphate in 3 doses by hypodermic injection, became so profoundly narcotized, that artificial respiration was necessary to keep her alive. Injections of ether, strychnia, and atropin were given without success. Finally after the administration of a liter of Physiological salt solution, the patient regained consciousness in a very short time, and made uninterrupted recovery.

In Coma of Diabetes.—Only temporary improvement has followed.

Used in Asphyxia Neonatorum.—One-half pint (at 115°) thrown into rectum.

I might keep on multiplying "in extenso" the conditions in which we can use the solution but will say that with such points as these in favor of a remedy, it is difficult to see how its use can fail to meet with universal favor.

"HOSPITAL DAY" IN EVANSTON.

"Hospital day" was celebrated in Evanston recently, when collections for the maintenance of the Evanston hospital were taken in all churches. An effort was made to raise \$6,500 and the trustees believe the amount was secured. Nearly \$1,000 was given in the First Congregational church. At some of the churches all of the collections were devoted to the fund.

PROSTATECTOMY, ITS INDICATIONS AND TECHNIQUE.*

BY G. FRANK LYDSTON, M. D., CHICAGO, ILL.

Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphilology in the Medical Department, Illinois State University; Surgeon to St. Mary's Hospital.

Widespread interest developed in the surgery of the prostate was one of the most remarkable events of the year 1902. That the prostate was an organ to be studied and dealt with according to the principles of modern pathology and surgery has been accepted for many years by the more advanced genito-urinary surgeons. The wild enthusiasm with which some of our surgeons hailed the advent of what appeared to be a new field, may be open to adverse criticism, but it was certainly a vindication of those who had long been fighting to establish prostatic surgery on a sound basis. The enthusiasm is especially remarkable when we consider that the general surgeon has been the principal factor in retarding prostatic surgery. The general practitioner, overwhelmed by the dogma of infallibility embraced in the so-called conservative traditions of ancient medicine regarding the prostate, has been supported in his ignorance and cowardice by many surgeons who have heretofore considered the prostate inoperable, because ignorant of its anatomy, pathology, or the sound principles of its surgical treatment.

The radical treatment of prostatic disease may be considered to have at last assumed its position as a rational procedure, in harmony with advanced ideas of surgical pathology and operative surgical technique.

Prostatic surgery will be still more firmly established when the same rules have been applied to it as to other regions of the body, the diseases of which are considered amenable to operative interference. Time was when the operation of ovariectomy was performed only in extreme cases. The frightful mortality attendant upon it is a matter of history at the present time. All that is necessary at the present day to establish the necessity for operation is the existence, or

*Read at 53d Annual Meeting, Chicago, May 30, 1903

even the probable existence, of an ovarian cyst. These remarks will apply with equal force to the various operations for uterine fibroids, appendicitis, etc., and I hope, ere long, to prostatectomy.

Most of the operative statistics of prostatic surgery so far available are almost worthless. Cases have been selected, for operation in which all other means have failed and serious complications have arisen, and the surgeon, feeling compelled to do something, has performed operations of a more or less radical character, with widely varying results.

In order that prostatic surgery should be given the same fair opportunity to display its value as is given to other surgical procedures, the most favorable time for operation should be selected. This is obviously the period before the patient is extremely advanced in years, and, more important still, before serious septic and secondary changes in the bladder, ureters and kidneys have occurred. In order that prostatic surgery should be placed upon a firm basis, several conditions should be complied with.

1. There should be a selection of cases in which a broad dividing line is drawn between those in which serious complications exist, and those in which they are absent. An operation performed in patients of even advanced years, in whom sepsis and renal disease have not developed, is comparatively safe. Prostatectomy compares very favorably with many operations which are considered less formidable, always providing the prostatectomy is performed at an early period in the development of the prostatic overgrowth. An operation upon the prostate in the presence of normal urine is, at least in the case of the perineal method, less formidable than many operations for stone, and when cases are properly selected the statistics of the surgery of the prostate will be of some value and the various radical operations will be shown to compare very favorably, as regards mortality, with other fields of operative work. In the collection of statistics, a broad dividing line should be drawn between the cases in which catheter life has not been established and the bladder and kidneys are sound, and those operated after

a more or less prolonged period of catheterization has elapsed and secondary bladder and renal changes have occurred. The former class is that upon which the statistics of the future will be based.

2. Both the profession at large and the laity should be impressed with certain fundamental facts regarding the prostate, namely, (a) the inevitable progress of prostatic overgrowth when once it has commenced, in by far the majority of cases. The cases in which symptoms do not develop, and the patient consequently remains perfectly comfortable throughout his entire life, do not establish non-progression of prostatic overgrowth, but simply prove that the patient is exceptionally fortunate in that the mechanical conditions produced by it do not obstruct the urinary way. (b) The results of catheter life, during which infection almost inevitably occurs. The longevity of the patients after the habitual use of the catheter has been once begun is, on the average, about five years, and those five years, in the majority of cases, hardly worth the living; in many instances by no means worth the living. The exceptions merely serve to prove the rule. (c) That an early operation, performed before the onset of bladder and renal complications, warrants a favorable prognosis, in by far the majority of cases.

3. The wisdom of an early diagnosis, to be followed by a radical operation, if the progress of the prostatic overgrowth is not speedily checked, is sufficiently obvious. The fatalism of the catheter habit, and the idea that all old men are doomed naturally to urinary disturbance, should be relegated to the valley of dead lumber. Both physician and layman should be taught the advisability of a careful supervision of the urinary apparatus of men at or above middle age. When symptoms are elicited, a careful examination should be made, and if enlargement of the prostate is found to exist, or develops later, a radical operation should be advised. There should be no compromise on the foregoing points, if mankind is ever to be freed from the misery produced by that *bête noir* of medicine—prostatic hypertrophy. The sooner the fallacious notion that all old men

are legitimately entitled to misery during their declining years is exploded, the better for the profession, and, obviously, the better for the public at large.

In speaking thus emphatically I am by no means basing my position upon the recent operative furor in the direction of the prostate. Those of the profession who are familiar with my writings for many years past, and particularly the men whom I have had the honor of teaching, are well aware that my position has been a most uncompromising and radical one ever since the feasibility of the removal of prostatic overgrowths was demonstrated by McGill, of Leeds, and Bel-field, of Chicago.

INDICATIONS FOR OPERATIONS IN GENERAL.

I have long taken the radical ground that, other things being equal, the existence of prostatic overgrowth in any case warrants the consideration of a radical operation. The cases may be divided into

1. Cases at or moderately beyond middle life, in which the bladder and kidneys are yet normal.

2. The same class of cases, so far as age is concerned, complicated by septic vesical inflammation.

3. The same class of cases, complicated by a greater or less degree of secondary renal disturbance.

4. Patients of from fifty-five to sixty-five years of age, in whom no secondary conditions have yet occurred.

5. Cases of similar age, in which catheter life has been established for a greater or less length of time, and infection of the bladder has occurred.

6. Similar cases, in which the kidney is infected to a greater or less degree.

7. Patients above sixty-five years of age, with sound bladder and kidneys.

8. Patients above sixty-five years of age, in whom the bladder and kidneys are involved in secondary infection, to a greater or less degree.

9. Cases in very advanced life, in which the patient is suffering intensely, and more or less serious secondary involvement of the kidney and bladder is present.

Cases in comparatively young subjects, with sound bladder and kidneys, should be

operated, irrespective of the severity of the symptoms. The only exception is in cases in which the symptoms are slight, the prostatic enlargement of a simple hyperplastic nature, and the progress of the disease can be checked by such measures as dilation, general and sexual hygiene, and massage. Prostatic enlargement in such cases should be regarded, from an operative standpoint, as demanding the same radical treatment as any other surgical condition in which progressive development and serious secondary changes are almost inevitable. The prognosis in such cases is extremely favorable. The per centage of deaths should be almost *nil*. Cases in comparatively young subjects, in whom septic vesical inflammation exists, should always be operated, but, where possible, the bladder complication should be brought under control, and that viscus restored as nearly as possible to an aseptic and physiologic condition before operation. If this be done, the prognosis is almost, if not quite, as favorable as in the preceding class of cases. With proper drainage immediate operation offers a very good prospect of recovery.

In comparatively young subjects, with more or less secondary renal disturbance, with or without vesical sepsis which, of course, usually exists, operation offers, after proper preparatory treatment, a fair prospect of recovery, unless the secondary renal disturbance is very marked. Even in these cases the results are sometimes surprising. I recall a case in which the specific gravity of the urine was only 1007 for many weeks; the patient greatly debilitated and anemic from severe vesical hemorrhages; casts in the urine abundant; albumin in plenty, and the urea for many days about one-half of one per cent, but in which I performed an operation at the earliest solicitation of the patient. This case recovered completely, although the operation was a very formidable one. Uremic symptoms were evident for several weeks.

The age of the patient is perhaps not so important as the relative degree of involvement of the kidneys; this, of course, within reasonable secondary vesical or renal complications, offer a favorable prognosis, in the

majority of cases, the mortality, of course, increasing *pari passu* with the age of the subject.

Patients above seventy-five years of age, in whom vesical and prostatic symptoms have become manifest for the first time, should be offered in many cases the benefits of palliative treatment. Life expectancy is short in these individuals at best, and if the catheter and palliative treatment keep the patient perfectly comfortable, there is a question in my mind as to whether a radical operation should be seriously considered as a matter of routine. The expectancy of life should in each case enter largely into the consideration of the advisability of an operation. Cases of moderately advanced age, in which catheter life has been established for some time, should, as a rule, be operated on. If the kidney is seriously involved, operation should in the majority of cases, be interdicted, save where all means of palliation fail to give the patient comparative comfort. When suffering is extreme and not amenable to palliation, operation is urgently necessary. Some patients would better die on the operating-table than go on in their condition of distress. In such cases, however, palliative drainage should usually be the operation of election. A point which is not sufficiently emphasized is that in cases of this kind, to use an Irish bull, we oft times kill the patient by curing him. i. e., we remove the obstruction which is the cause of his suffering, but his life is destroyed by a lack of adaptability to the new conditions on the part of the bladder and kidneys. Ether-nephritis and nephritis *ex vacuo* are very frequent. More frequent still is acute vesical, ureteral and renal infection, superinduced by the relief of pressure, and consequent circulatory and nutritive disturbance produced by the removal of the obstruction to the urinary outflow.

In a general way, patients with sound bladder and kidneys, from sixty-five to seventy-five years of age, offer a very favorable prognosis, providing the perineal operation is practicable. In very old patients with severe vesical and kidney infection, radical operations upon the prostate are usually contradicted. The fact that this is the class

of cases upon which the operative statistics of the prostate up to date have been largely based explains the discouragement which has been experienced in prostatic surgery.

SELECTION OF OPERATION.

The various operations on the prostate have each their advocates, who claim that some particular method of operating is applicable to all cases. If this be true, then the prostate is an exception to all the rules of modern surgery. When a surgeon with a short pudgy finger frantically brandishes the same at me and claims that no case of prostatic enlargement exists which he cannot operate successfully by the perineum, I am thankful that there are men in the profession who are thus capable of adding to the gayety of nations.

The operative surgery of the prostate, like that of other regions of the body, demands a differentiation of cases, and the adaptation of methods, not only to the various classes of cases, but to each individual case. The ideal operation is unquestionably the perineal method, where conditions are such as would make it applicable. All cases are not susceptible to attack by the perineal route. When combined with suprapubic cystotomy, however, the perineal method enables us to master most cases. The furor which the perineal operation is at present exciting is somewhat entertaining to me. It gives me a great measure of satisfaction, as showing the wonderful progress which has suddenly been made of late in the surgery of the prostate. Without any desire to contest the priority of any operator in this particular field, but merely to call attention to the fact that the soil which has been recently so frantically plowed by some of the general surgeons is by no means virgin, I will remind you that the perineal operation in various forms has been performed by numerous operators for some years past. I removed the prostate by the perineal route for the first time in 1893. The feasibility of the operation was suggested by the old method of von Dittel. This was a County Hospital case, and one in which I deemed it wise to establish through and through drainage. In seventeen cases since that time I have removed the prostate

by the perineal route, with or without subsequent suprapubic drainage. In several instances I have found it practicable to remove the adventitious tissue without opening either urethra or bladder. In my textbook, published in 1899, I called the attention to this procedure, without, however, giving a detailed description of the operation, because of my lack of knowledge of its range of adaptation, and the non-perfection of its technique. This same operation I demonstrated upon the cadaver before the classes at the College of Physicians and Surgeons, five years ago. I demonstrated the operation to Professor W. T. Eckley, and in the presence of Drs. Mortimer Frank and Rogers at that time. I recall that Professor Eckley expressed himself as considerably surprised at the readiness with which the prostate could be brought down into the perineum, within reach, by hooking it down with the fingers in the rectum, or by depressing with the ordinary urethral sound in the bladder. Prostatic depressors are well enough in their way, but in my experience an ordinary sound of moderate size is the most useful instrument of this kind.

It is to be understood that "prostatectomy" of any variety is a misnomer. We simply shell out, so far as practicable, the tissue which comprises the greater portion of the bulk of the prostatic tumor. A certain amount of secondary inflammatory intra- and extra-capsular tissue exists, which, with the capsule proper, is left behind by the operator. Once the tumors are enucleated, and the obstruction to the urinary way removed, nature takes care of the remaining adventitious tissue very nicely. Total prostatectomy is not practicable within the limits of safety. Furthermore, it is absolutely unnecessary. In cases in which a bar at the neck of the bladder exists, or there is a moderate median obstruction, without distinct tumor, the Bottini operation, via the perineum, or the direct use of the galvano-cautery through a fenestrated endoscope, is often effective, and is a rational method of procedure. Simply division of the bar—median prostatectomy—often gives perfectly satisfactory results. I have operated in a

number of instances on the principle of the Abbe string saw, with advantage. A long, stiff, eyed probe is armed with a stout piece of silk, in which a number of knots have been tied. The probe is passed into and beneath the obstruction, at the neck of the bladder, and drawn out of the perineal wound by the finger, thus causing the ligature to traverse the tissue which it is desirable to divide. A slow sawing motion with the ligature, care being taken to protect the tissues of the perineum, soon divides the obstruction. Where the obstruction is not large, this method is often an excellent one, as the danger of hemorrhage is by it reduced to a minimum. Prolonged drainage with a rigid tube and the introduction of sounds during convalescence are usually necessary.

- In cases in which palliative operation only is to be considered, they may be operated and the bladder drained, either from above or below. Great difficulty has been experienced, it is true, in maintaining a permanent suprapubic fistula which will permit the patient to keep clean and dry. If the opening in the bladder is made very small, dilatation of a small puncture rather than a large incision being relied upon, the puncture being made relatively close to the vesical neck, the fistula will usually be under control after healing is completed.

I have several cases under observation at the present time, in which the patients are so comfortable with a supra-pubic fistula that they simply will not listen to the slightest suggestion of a radical operation upon the prostate. In one instance the old gentleman empties his bladder without any great difficulty at stated intervals, by the use of a glass funnel, which he applies over the fistulous opening.

I have in several instances succeeded in draining the bladder and maintaining a permanent fistula by dissecting through the perineum a narrow track, traversing the prostatic tissue, and entering the trigone. There is some difficulty in keeping a fistula of this kind open, but, where the patient can be under observation, it is worth trial. The cases in which I have thus far performed it, I am free to say, have not been very tractable, and

I am unable at this juncture to make any positive statement regarding its true value. So far as drainage of the *bas fond* is concerned, the method should be ideal, always providing permanent drainage is shown to be practicable. That the fistula is not so easily controlled by mechanical means as one in the supra-pubic region is self-evident, yet my experience thus far has been fairly satisfactory in this respect.

In many cases the suprapubic, or the combined suprapubic and perineal sections are necessary. My rule is to remove the growth through the perineum, if practicable. In large, pedunculated growths, which sometimes practically fill the bladder; also in short, deep, fat perinei, it is sometimes with extreme difficulty that even the attachments of the tumors can be reached, much less their fundi.

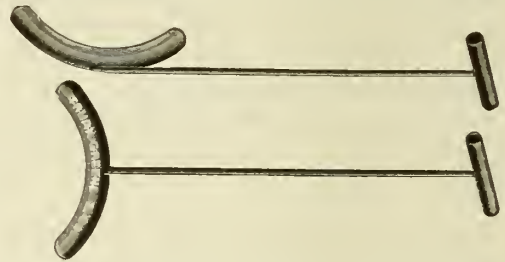
Under these circumstances the combined or suprapubic operation is often imperative. In some of these cases hemorrhage is very serious, and suprapubic section, with packing of the bladder, is absolutely necessary. Where the prostatic tumor is large, and brought down with difficulty or the perineum deep and short, I have not hitherto hesitated to resect the coccyx. This complicates matters very little, and practically does not add to the dangers of the operation, and adds surprisingly to the facility of reaching the pathologic tissue.

An instrument which I have used in several instances with satisfaction is presented herewith. It is introduced into a median incision at the apex of the prostate, the urethra being opened as a preliminary to the removal of the organ. The instrument is introduced closed, and is then opened with the finger. The vesical end of the instrument is patterned after the ordinary urethral sound, both ends being rounded. The convex border of the instrument rests upon the interior of the vesical neck, "perineumward." Considerable traction upon the prostate may be exerted with this instrument with perfect safety, and the extent to which the organ can be drawn down into the perineum is surprising to the uninitiated.

The sooner the profession is brought to realize the fact that no single operation can

be successfully used in a routine manner in obstructive prostatic disease, the better for surgical science. We are justified in being suspicious of operators who report successful results from the routine application of any operative procedure. The various mutilating operations upon the testis and cord were boomed in the near past quite as enthusiastically as the Bottini operation has been of recent years. The history of the rise and fall of castration in prostatic disease is only too familiar. The conservatism of those who have hesitated to receive the Bottini operation as a routine procedure has been justified by the past history of prostatic surgery, and its wisdom is being daily confirmed by the experience of the profession at large.

Within a few years, at the present rate of progress in prostatic surgery, operations



done in the dark will no longer be even condoned. In the dead lumber room of the future, the star-eyed goddess, Science, will probably be found perched on a huge mound of testes, born under a lucky star, puzzling her aching head over a Bottini instrument, and incidentally shedding a few tears over the fate of past generations of prostatiques.

The modified—i. e., perineal—Bottini has its limitations, and, in my opinion, they are very narrow. However modified, the Bottini method is, to my mind, a compromise with prostatic pathology and surgery. While it may be useful in certain cases, it is demanded only because rational surgery is inapplicable, chiefly because of delay on the part of the patient in submitting to operation, or because of certain rare anatomic-pathologic conditions, which contraindicate the rational procedure of complete extirpation of the offending tissue. The less the Bottini operation is talked of, and the sooner it is re-

garded as an operation of necessity rather than election, and applicable in cases in which rational surgery, i. e., complete extirpation of the adventitious tumors, is not practicable, or in cases in which the patient absolutely refuses to submit to extirpation of the offending tissue, the sooner the radical treatment of prostatic disease will assume its rightful place in operative surgery.

The history of prostatectomy proper is being and will still further be marred by the results and alleged results of surgical routine. In many instances professional opinion has been biased by the reports of cases by men of superheated imaginations, India rubber consciences and a tendency to juggle with the multiplication table. Possibly double vision may explain the transformation of one case operated into two reported.

This method of the "fake" specialist would command admiration as an advertising dodge, were it not so cheap and easy.

TECHNIQUE OF THE ENUCLEATION OF PROSTATIC TUMORS.

Preparation of the Patient. Where it is practicable to do so, as is usually the case, the patient should be kept quietly in bed from three days to a week prior to the operation. The kidneys demand careful attention, and a careful study of the urine should be made from day to day. The diet should be liberal, but red meats should be excluded, milk being the staple article of diet. Great care should be taken to avoid lowering vitality by a too restricted diet. This is a mistake that is very often made, and the patient goes to the operating table with a resistancy lowered, rather than increased, by the preparatory regimen. Pure water should be given in abundance in most cases although some discretion is necessary here. Urinary antiseptics are valuable. Urotropin, eucalyptus or boric acid are all of value, urotropin being, of course, the most efficacious of all. The bladder should be irrigated at stated intervals with mild antiseptic solutions. A mild solution of oxychlorine is often effective. Nitrate of silver, in weak solution, may be of service. If great irritation about the prostatic urethra exists, with frequent, painful and spasmodic micturition, anodynes

should be given in sufficient quantity to control it, thus securing rest to the bladder. Anodynes act best when given by the rectum.

When the patient is placed upon the table for operation, the surgeon should understand that the correct method of operating will be governed largely by the character of the tumors. It is well to advise the patient, before operating, of the possible necessity of operating suprapubically. The exigencies of the case may, in exceptional instances, be indicated by the preliminary use of the cystoscope. In general, however, while this instrument adds to the accuracy of diagnosis, its use simply enhances the dangers of subsequent radical operations through the shock, traumatism and sepsis incidental to the exploration. Especially is this true where it is necessary to give an anesthetic in order to explore the bladder with the cystoscope. There seems to me to be often very little sense in the refinements of cystoscopic diagnosis. In many cases of prostatic disease in which a radical operation is absolutely necessary the principal danger to the patient is from shock acting reflexly upon the kidney, to which is added the further danger of anesthesia. Why double the danger by preliminary diagnostic exploration, which modifies not at all the treatment and merely gratifies the diagnostician without adding anything of value to the case? The impression forces itself upon me that the danger compounds very rapidly with every exploration. A patient who, having had a prolonged cystoscopic exploration a few days before, goes to the operating table for a radical operation often has very little prospect of recovery. In many instances of fatal result after prostatic operations one or more preliminary explorations is responsible for the patient's death.

The patient should be prepared with a view to doing, not only perineal prostatectomy, but suprapubic section, if necessary. Shaving and antisepsis should be scrupulously carried out.

Chloroform should be the anesthetic of election for, as is well-known, it is immeasurably safer than ether in the class of cases under consideration.

The patient being placed in the lithotomy position, a medium-sized sound is introduced into the bladder and given into the hands of the assistant. An inverted Y-shaped incision is made in the perineum, the longer arm of the Y corresponding with the median raphe of the perineum, and the short arms traversing the region just in front of the anus. It is sometimes advantageous to make the lower incision curvilinear instead of Y-shaped. The length of the lower arms of the incision, or of the crescent, as the case may be, should be modified by the conformation of the perineum, which should be longer as the perineum is shorter, deeper and more fatty. The triangular flaps involved in the incisions should embrace all the tissues down to the muscular structure of the urethra. The triangular flaps having been dissected up cleanly, so as to expose the outlines of the

be better than a perineal drain. Where a single prostatic tumor exists on one or the other side, an attempt should be made to enucleate it without opening the urethra, unless there be some positive indication for the latter procedure. A free incision in the capsule of the prostate is rarely necessary. I find that the best plan is to make a puncture with a pair of strong scissors. The puncture is enlarged by opening the blades of the scissors; the dilating finger of the operator does the rest. In some instances an incision of this kind should be made upon either side. Where opening the urethra seems advisable or unavoidable, the prostatic retractor shown herewith will be found exceedingly useful. An opening is made upon the staff at the apex of the prostate. Through this incision the prostatic urethra and neck of the bladder are thoroughly dilated with the finger so far



urethra clearly, should be everted, and fastened to either buttock by a single strand of medium-sized silk traversing its free angle. Careful blunt dissection downwards along the urethra to the apex of the prostate must now be made, the rectum and the tissues in the ischio-rectal fossa being pulled down strongly by a retractor in the hands of an assistant. If sufficient room cannot be obtained in this way, it can be increased greatly by resecting the coccyx. As the dissection is being made, the assistant, using the sound as a lever, its convexity being directed perineumward, pries the prostate down into the wound as much as possible. Where the prostatic tumors are of moderate size and quite circumscribed, it is sometimes possible to enucleate them without opening the urethra. It is sometimes advisable to do this, unless the condition of the bladder be such as to positively demand drainage, or intravesical work. Even here a retained catheter may

as may be. The prostatic retractor is now inserted closed, and under the guidance of the index finger in the bladder opened in such a manner that its convexity rests upon the lower segment of the bladder. The sound is, of course, removed before the neck of the bladder is dilated, and the retractor inserted. An intelligent assistant has now a very excellent command of the situation. The slim wire shank of the instrument, while it is a guide, in a certain sense, to the enucleating finger, does not encroach by its bulk upon the field of operation. In some cases it is found impossible to pass a rigid staff into the bladder. Under such circumstances, one of two procedures may be resorted to: (1) A gum elastic catheter may be passed as a guide; (2) the urethra may be opened in the apex of the prostate upon a staff which can easily be readily passed down to this point. In enucleating the prostatic overgrowth, it should be remembered that in

some instances damage may be done by overzealousness in the attempt to remove all the adventitious tissue. No circumscribed overgrowth should be spared, but it should be understood that there is more or less diffuse tissue hyperplasia surrounding the tumors proper, and secondary to them, which it is both dangerous and unnecessary to remove, as it shrinks down readily when once the offending tissue has been extirpated. All distinct intumescences should be removed.

In cases in which distinctly circumscribed single or multiple tumors are not found, but where there is diffuse enlargement of one or both lobes, it is usually practicable to extirpate the entire mass by intracapsular enucleation. If a distinctly pedunculated or even plainly circumscribed median tumor exists, it may not be practicable to remove it extravasically. Under such circumstances it should be twisted off within the bladder, or enucleated through an incision upon its mucous surface.

After the adventitious tissue of the prostate has been thoroughly removed the bladder should be carefully explored with the finger for stones.

I desire to emphasize the fact at this juncture that in any instance in which the tumors are removed by incisions from the mucous side, either through the urethra or bladder, the ideal perineal operation is distinctly debarred, and the operation reduced to the same plane, essentially, as that occupied by suprapubic cystotomy and intravesical extirpation of the prostatic overgrowths. Where the tumors are more or less polypoid in character, or if sessile, are situated very high up, their bulk being distinctly intravesical, it is occasionally necessary to combine suprapubic cystotomy with the perineal method, and remove the tumors under consideration from above.

The question of air versus fluid distention of the bladder during operation is largely a matter of taste. I have been in the habit of distending the bladder with either sterile water or weak antiseptic solutions, after thorough antiseptic irrigation. Drainage after the operation should be carried out by a large tube of some kind. Personally, I prefer a rigid tube, of the design already

recommended, although in some instances I use a large rubber tube. The appliance used for drainage like some other points in the technique is largely a matter of individual taste. The duration of drainage should be governed by the condition of the bladder. I believe it is advantageous in some cases to dilate the neck of the bladder a few times before healing is complete.

Discussion.

E. Mammen, Bloomington: Mr. Chairman. I do not think that this paper should be permitted to pass without some discussion. It is so excellent that it leaves practically nothing to be added. It covers the ground fully and carefully, yet it occurs to me to ask the reader of the paper as to the method of taking away the prostate by means of biting instruments, and also as to the necessity of exploring the bladder for calculi at the time of the operation.

R. McCullough, Chicago: I desire to emphasize one point made by Dr. Lydston, and that is with reference to the age of the patients who undergo these operations. My experience has not been extensive; I have only had two cases. One of them was a man, eighty years of age, who had become addicted to the use of morphine. This was a very marked element in his recovery. I did the perineal operation, as Dr. Lydston has described it, with this modification: Instead of dissecting down the flap beforehand, I made a Y-shaped incision, such as Dr. Murphy makes, cutting down to the muscularis, separating that with my finger until I came to the gland. I nicked the gland longitudinally with Kocher director, which I felt against my finger. The capsule was intact where the arms of the Y had given off; I incised it, and continued my dissection. My cases were such that I could readily separate the gland. In one case the third lobe was so large that I was able to peel it out without any cutting whatever. All the cutting I did was in separating the gland from the anterior urethra, and I peeled out a mass as large as a silver dollar, but much thicker. There was no apparent shock from the operation. I made one mistake in withholding morphine from him altogether. I instituted drainage through one side with a large tube and gauze, and passed a No. 10 American catheter through the urethra. The gauze was removed on the third day, and the drainage tube on the fifth day, and on the sixteenth day I withdrew the catheter. There was no leakage. Union was complete. This man made, so far as the operation was concerned, an uninterrupted recovery; but a few days after the operation he went into collapse. Whether it was due to the relief of the pressure or lack of morphine, I do not know. At any rate, stimulants failed to bring about a favorable result until I gave him morphine. If he had been under the care of a nurse, or someone who was not versed with the fact that he had been addicted to morphine, I believe he would have died. His pulse almost ceased. I

tried strychnia, whiskey, and nitroglycerine, and these having failed the administration of morphine entered my mind. I gave him morphine, and he came to. This man can now hold his water for ten hours. He has perfect control of it. I was urged by his friends not to operate, but he was in such a pitiable condition that something had to be done for him. A suprapubic operation was performed on him two years previously. His bladder was full of pus, and at that time a vasectomy was also done. All of these operations failed to afford the desired relief. The patient was troubled with frequent urination; he urinated about every fifteen minutes. I had him under treatment for six weeks, trying to build him up, before I operated. He was in bed, and was not able to get up and around. Today he weighs nearly 180 pounds, and there is every prospect that he may live for a great many years. If a man is in as good condition as he was, I would not hesitate to operate on him, even if he were much older; but I think we should bear in mind that many of these patients have become addicted to the use of morphine on account of suffering, and that we should not withhold it from them too suddenly.

Dr. Lydston (closing the discussion): In reference to the question of Dr. Mammen in regard to taking away piecemeal certain portions of prostatic tissue and exploring the bladder for calculi, the technique for this is as I have presented it.

It is necessary to have the *rongeur* forceps at hand, ready for use, because there may be prostatic tissue which you cannot shell out as easily as you can shell a pea from its pod.

So far as exploring for calculus is concerned, it is presupposed that no one, who has had experience in cases of this kind, would leave a case until he has explored the *bas fond* with the finger, after dilating the neck of the bladder.

There is one point I did not touch on particularly in my paper, but I will do so now, that is, not only is there too much claimed for, but too much is expected of, prostatectomy in advanced cases. We must remember, no matter what operation is undertaken in advanced cases, we are dealing with a septic and senile bladder, as well as a more or less damaged kidney. There are cases in which there is atheroma of the bladder walls, and on which no operation can be performed successfully, and the question of enucleation of the prostate is not to be considered. I have seen cases in which the bladder walls were not only immensely thickened, but had the appearance and consistency of cartilage. I would not have it understood that no disagreeable results follow operation in these cases, and I would emphasize the fact that they do not all go smoothly on the operating table, nor are they all great successes. Some surgeons operate so skillfully that they say they do not get incontinence of urine, but I must confess that I do get occasionally a case of incontinence of urine following this operation. There is this satisfaction, however, that while it is annoying, it is not dangerous, and the operation is still a life saving one.

In a recent discussion at a meeting of the Chicago Medical Society, the question of im-

potency following these operations was brought up. I do not think it cuts much figure with patients who are advanced in life, but in those in whom virility existed before operation, in young subjects, it has no effect on virility. Impotency is not produced, as a rule, by the operation. In some cases in which it apparently results, I am inclined to think it is pseudo-impotency of a psychic character.

REMARKS ON SYPHILIS OF THE NERVOUS SYSTEM.*

BY HUGH T. PATRICK, M. D., CHICAGO.

The following desultory remarks are incomplete and not new. They aspire to be nothing more than disjointed reminders of some of the things we all know, or have known, or ought to know.

That syphilis of the nervous system is nearly always "late syphilis" is true. The initial lesion and secondary manifestations do not affect brain, cord or peripheral nerves except to involve them in the general influence of an acute infection. The headache, peripheral pains, sleeplessness and even delirium of secondary syphilis are scarcely to be considered as syphilis of the nervous system. Formerly syphilis of the nervous system was classed as tertiary and there is no objection to this if it is well understood that "tertiary" does not involve the element of time. In the same way we say that syphilis of the nervous system is always "late" syphilis. But by this term we indicate a certain sort of lesion and not that considerable time must have elapsed between the chancre and this so-called late syphilis. In other words, brain syphilis or spinal cord syphilis may appear six weeks, six months, six years or sixteen years after chancre, and the lesion which appears at six weeks differs in no essential from that coming sixteen years later. Consequently, the element of elapsed time enters not a whit into the questions of diagnosis, prognosis and treatment. As a matter of accumulated experience, statistics have shown that about one-half the cases of syphilis of the nervous system occur within the first three years after infection, and that after fifteen years of quiescence the appearance of brain or spinal cord syphilis is exceptional.

Part of a Symposium on late Syphilis before the Chicago Medical Society Oct. 14, 1903.

Even within the profession I believe there is a very general tendency to attribute numerous symptoms of middle-aged and old patients to syphilis contracted twenty, thirty or forty years before. Such a sequence is of extreme rarity.

I must add that quite otherwise is the time relation of tabes, and general paresis—both undoubtedly in some manner induced by lues. These incurable diseases may come a score or two of years after chancre, and I might say that the same perhaps applies to arterio-sclerosis. But the relations of syphilis to this last condition are so obscure that I shall not touch the subject at all.

Next in currency to the fallacy of the chronological remoteness of brain syphilis, seems to be the belief that in the vast majority of instances brain syphilis means gumma: that is, gumma in the ordinary acceptance of the word as meaning a syphilitic tumor. At least in my experience, when a practitioner speaks of brain syphilis, he has in mind a gumma in size somewhere between a filbert and an orange. Now such a growth is the least frequent manifestation of syphilis of the brain or cord. First in frequency is syphilitic arteritis, then syphilitic meningitis and, last, gumma. Strictly speaking, all might be called gummatous in that they are constituted of granulomatous cellular accumulation.

The foregoing naturally leads to the statement of another basic fact in the anatomic constitution of syphilis of the nervous system: a fact long known but particularly emphasized by Gowers. Syphilis of the nervous system is practically never syphilis of nerve tissue. So far as we know there is rarely such a thing as syphilis of nerve cell or nerve fibre. The lesion primarily attacks only mesoblastic structures—the vessels, membranes or connective tissue—and symptoms due to impaired function of neurons arise only because of secondary involvement of these nerve units. Unless this relation is clear in the physician's mind he can have no real understanding of symptoms, diagnosis and treatment, and particularly will he be at sea as regards prognosis. It seems worth

while, therefore, to devote some space to the question "how does a syphilitic lesion of the nervous system produce the symptoms?"

First and foremost by interference with the circulation; interference which in degree ranges from the slightest and most transient slowing of the blood current to complete obliteration of the largest arteries in the brain; interference which in location ranges from vertex to *conus medullare*; may affect cortex or basal ganglia, corona radiata or bulbar nuclei, anterior horns or lateral tracts, or, what is of great importance, may involve any two or more of the most diverse parts.

Symptoms caused by circulatory disturbance are ordinarily due to cellular infiltration of the vessel walls, sometimes simply to pressure on the vessel by a gumma or meningitic mass. By the former process the vessel is made irregular, its calibre is diminished and the interna often roughened. The condition may develop rapidly or slowly, often proceeds by fits and starts. It may be restricted to one artery, be scattered here and there or become so general as to involve all the principal arteries in the brain. In degree it may be very slight or may cause complete obliteration of the middle cerebral, the vertebrals or even the basilar. Naturally, slight involvement of an artery will cause trivial symptoms, just as will inconsiderable arterio-sclerosis, and the character of the symptoms will depend upon the part affected. Among the more frequent are dull headache, dizziness or faintness, insomnia, tinnitus, numbness or tingling, twitching, slight involvement of some cranial nerve, some little interference with speech, scintillating, or obscuring scotoma. As these symptoms are caused only by impeded flow of blood, not by complete stoppage of an artery, they are transient, even ephemeral. That is, they come in spells. The patient sees double for a few minutes; he has a sudden numbness and weakness in one hand but before he has time to be frightened the trouble is gone; he has a headache, grows dizzy and faint, fears he will fall, gets a drink of whiskey, rests a few minutes and is all right; while talking his tongue suddenly goes thick and he gets his words mixed; he goes home or sends for a

doctor, and in half an hour is talking as well as ever.

From these apparent trifles the symptoms progress in degree and duration *pari passu* with the arterial lesion or lesions. Instead of transient dizziness the patient will have an apoplectoid or epileptoid seizure with loss of consciousness. Or he may have a monoplegia or hemiplegia, complete because the blood current has been arrested but temporary because the flow merely stopped for a little time, the blood did not coagulate and the flow returned, or because the obstructed artery was supplemented by a quickly established collateral circulation. Finally, if the arterial walls become so involved as to obliterate the calibre or cause the blood to clot in it and there is no collateral circulation, the tissues supplied by that artery must die for want of blood, and such lesion is as incurable and permanent as is cerebral thrombosis in a man of eighty. This holds good whether the artery be the middle cerebral or a bit of a twig the occlusion of which causes softening of only a part of the nucleus of the third nerve. What is dead is dead and all the mercury and iodide of a continent cannot revivify it.

The location and extent of this permanent disability will naturally depend upon the location and size of the occluded vessel. If a twig in or beneath the leg center be plugged, there will be partial paralysis of one leg; if the Sylvian artery be occluded, hemiplegia results; if a branch of the basilar become thrombosed, bulbar paralysis, more or less complete, will be the result; if the circulation be cut off from one occipital lobe, the patient will have homonymous hemianopia; if there be bilateral softening in the region of the basal ganglia, pseudo-bulbar paralysis is the symptom; if the frontal lobes suffer, some degree of dementia will be manifest and the case may closely resemble one of general paresis.

If the arteries of the cord are affected the symptoms will be in a general way those of paraplegia with its concomitants in various groupings and combinations, slow or rapid, trivial or grave. Just here I may stop to interpolate that syphilis very rarely causes cere-

bral hemorrhage. Embolism is also rare. Syphilitic paralyses from arterial disease are due to thrombosis and vascular obliteration.

Second only in importance and frequency to specific arteritis is specific meningitis. And with this I shall include syphilitic affections of the cranial nerve trunks. For the most part invasion of these nerves means that they have become involved in a specific basilar meningitis, but occasionally the nerve trunk itself is the seat of isolated accumulations of specific granulosomatous tissue.

Syphilitic meningitis may be of the base, or the convexity or both. It produces symptoms by involving the arteries of the pia which supply the nobler structures beneath, by involving nerves as they pass from brain or cord, by impeding return circulation and by increase of intracranial pressure. When the lesion attacks the convexity, characteristic symptoms are those referable to the motor and sensory cortex. When the base is attacked, cranial nerve signs predominate. The cortical signs are at first those of irritation: twitching, jerking, trembling, typical Jacksonian fits or general convulsions; numbness, tingling, dull pain, clumsy feeling, even incoordination. As the disease progresses paresis or paralysis and anesthesia follow.

Presenting as it does a large superficial area and relatively wide space divisions of function, the cortex presents opportunities for isolated symptoms of disease. A patch of meningitis over the hand center may cause spasm of the fingers or hand alone, the leg and face being quite unaffected. A beginning lesion lower down may show itself by a bit of numbness and twitching of one side of the face. A trifling lesion of Broca's convolution gives rise to some hesitancy of speech or occasional paraphasia and nothing else.

As just noted, syphilitic meningitis of the base may be known by involvement of the cranial nerves and as the place of predilection is the interpeduncular space, the third nerve is the one most frequently paralyzed. Probably the sixth comes next. In nineteen cases out of every twenty of ocular paralysis appearing in adults, the cause will be found to be one of four diseases: tabes, general par-

esis, brain tumor, brain syphilis. By far the most frequent causes are syphilis and tabes, maladies that are easily distinguished. Cranial nerves posterior to the sixth are less frequently affected but none is exempt. Lying as they do side by side the seventh and eighth are apt to be affected together. Paralysis of the fifth, causing anesthesia of one side of the face, is always preceded by a period of irritation or facial neuralgia. If the pain continues after the anesthesia has begun, as is generally the case, we have *anesthesia dolorosa*—indubitable evidence of organic disease of the nerve.

As Heubner long ago pointed out, even when the pathologic process is limited to the base, some of the symptoms may come from the cortex or deeper structures. This through the vessels. The middle cerebral or other large arteries coming off from the circle of Willis may be so compressed or infiltrated by a basilar meningitis as to be seriously compromised, and symptoms referable to the area of distribution will then be present.

The symptomatology of gumma need detain us but a moment. It is coincident with that of brain tumor, a chapter in neuropathology that has been written and rewritten a thousand times. A gumma produces symptoms by increase of intracranial pressure, by pressure upon or infiltration of nerve elements and by interference with the circulation. The last seems to receive but scant recognition. Nevertheless it is most important. A specific neoplasm, like any other, may develop in one of the so called silent regions of the brain and make no sign until it grows up to and presses upon an artery. Then, after a few preliminary symptoms, the current in the vessel is cut off and an apoplectic stroke results. Through the vessels, too, a gumma, like a basilar meningitis, may cause symptoms at a distance.

In addition to the above named signs of the different forms of brain syphilis there is a group of symptoms that may be called general: symptoms due alike to luetic arteritis, meningitis and gumma. Some of them are more often caused by gumma, others more often by the other lesions, but they are best

considered together. First and most important of these is headache. It is present in about 75 per cent of the cases. Notoriously nocturnal in its exacerbations, it may be continuous, vesperal, or even diurnal and allow the patient to sleep all night. It is usually severe. The location is unimportant. In the beginning, although the lesion is constant, the headache is not; it may remain away for days or even weeks at a time and thus be mistaken for migraine or for malarial, infectious or stomacheic cephalalgia. As the case advances, however, it becomes more continuous and may finally keep the patient in agony day and night. If occipital, the pain not infrequently radiates down one or both arms, even to the fingers, and may be accompanied by rigidity of the neck. Most frequently, but not always by any means, some part of the head is tender to percussion or pressure.

Vomiting occurs in many cases, more frequently when the posterior fossa is invaded and when a large gumma or extensive meningitis is present. Such emesis, although of cerebral causation, may take place only when the stomach is full and may be determined more by one sort of food than another. Nor should it be forgotten that cerebral vomiting is not necessarily projectile.

Optic neuritis is far from rare. It should always be looked for although it rarely attains the intense degree often seen in brain tumor. There is nothing to distinguish the choked disc of syphilis from that of tumor, but its presence often aids in differentiation from functional disease, general paresis, and arteriosclerosis.

Sometimes in the beginning of cerebral lues the symptoms are largely those of neurasthenia. Without focal signs there is a general lack of physical and mental vigor, or principally a condition of myasthenia. Indeed, insomnia may be the only complaint of the patient. But in such cases we ordinarily have not long to wait for additional symptoms, suggestive or indicative of organic trouble.

Fever is rare as a symptom of syphilis of the nervous system unless the ponto-bulbar region is affected. This is the general belief

and is a rule with few exceptions if small rises of temperature, one-half to one and one-half degrees, are disregarded. But I have seen one case in which for months without focal signs, there had been a temperature varying from normal to 104° F. The patient made a perfect recovery on specific treatment.

Among the general symptoms may be mentioned polyuria, polydipsia and polyphagia or bulimia, although they generally indicate a lesion of the base, most frequently in the posterior fossa. Still, I have seen two cases of bulimia in which neither the base nor the posterior fossa seemed to be invaded.

Next to headache, perhaps the most important general symptom of brain syphilis is a peculiar hebetude or stupor. It is not peculiar to syphilis but is found most frequently in this disease. There is no good name for it. The condition is much like that of a person excessively sleepy or stupidly drunk. When well marked it constitutes a sort of pseudo-coma. The patient is profoundly soporous, utterly oblivious to everything, but can be awakened and once awake is neither delirious nor irrational, although he is very apt to be irritable, and may resent interference with violence. An example or two will illustrate.

Case 1. A middle aged man, seen in consultation, was supposed to have brain syphilis but there was uncertainty as to the primary lesion. When we reached the bedside he was profoundly unconscious, with snoring respiration and complete muscular relaxation. Some shaking and calling to him and a little cold water in the face, roused him. He at once recognized his physician, took in the situation and saw that the door into an adjoining room was closed before answering our questions. He then told us just when and under what circumstances he had contracted the disease and pointed out the cicatrix of the initial lesion, which was in an unusual place. As soon as we ceased questioning he lapsed into his former state.

Case 2. Another middle aged man who had been acting unlike himself for a short time and had been suffering from excruciating headaches, had become stupid, gone to

bed and rapidly passed into what seemed to be coma. His physician asked me to see him. It took considerable vigorous slapping and shaking and some pressure on the supra-orbital nerves to rouse him, and at first these efforts elicited only sundry grunts, oaths, and movements of resentment and resistance. Finally he awakened and was then fully alive to his surroundings and able to give an intelligible account of himself. But unless constantly plied with questions he lapsed into stupor.

Case 3. A man of 26 was brought into the hospital in a state of unconsciousness. Results of the examination were negative as regards the more frequent causes of coma, evidence of trauma was absent and there was no paralysis. All ordinary means failed to rouse him, but, suspecting brain syphilis, I applied a very strong electric current to one of his legs hoping that the pain would bring him to his senses. The desired result was attained more suddenly than expected, for I just escaped a vicious kick and the patient sat up and cursed me roundly for disturbing him. So long as I could keep him awake he was rational and fairly clear, although very surly. As soon as left to himself he turned over and became profoundly soporous. All three of these cases made a perfect recovery on specific treatment.

When with this stuporous hebetude the patient presents some focal symptom, such as ocular paralysis, monoplegia or hemiparesis, the complex is exceedingly suspicious, not to say characteristic.

Last, but not least, it must be said that the most typical thing about syphilis of the nervous system is the lack of type. It is consistent only in its inconsistencies, stable only in instability. If one has seen one hundred cases of nerve syphilis he has seen one hundred different clinical pictures. This clinical polymorphism is due not only to the great diversity in location of the lesion but to the variety of lesions as well. Sometimes the observer has to do with a specific arteritis, sometimes with meningitis, sometimes with gumma, sometimes with simply gummatous infiltration of some nerve trunk; often he has to do with two or three or all four of

these conditions. Then, when we remember that the lesion may be located anywhere from the vertex to the cauda equina, that most frequently more than one point is attacked and that the rate of progress of the different lesions is exceedingly uncertain, it is not difficult to comprehend the limitless variations of the clinical picture. Finally, knowing the tendency of granulomatous tissue to undergo regressive and necrotic changes, the sudden appearance of symptoms from arrest of circulation, and their sudden disappearance from resumption of the flow of blood, or the establishment of collateral circulation, we can understand the peculiar coming and going of some of the voicings of syphilis of the nervous system. Any brain case having an odd mixture of psychic and somatic disorder, a sequence of sign illogical as regards either time or localization, or a bizarre appearance, disappearance, reappearance, amelioration and aggravation of symptoms, should at once awaken suspicion of lues. For cerebral syphilis nothing is impossible. Insomnia, somnolence or an alternation of them; pain without anesthesia, anesthesia without pain or painful anesthesia; spasm without paralysis, paralysis without spasm, or the two combined; monoplegia, paraplegia, hemiplegia, crossed paralysis, single or multiple cranial nerve paralysis, and any imaginable grouping of them; focal signs rivaling in neatness the most dexterous work of experimental pathology or a hodge-podge of symptoms carrying only confusion to the brain anatomist and physiologist; half-way manifestations, scarcely inflammatory, more than neoplastic; these are a few of the tricks of specific lesions within the cranium.

The following synopses may serve as a bird's-eye view of part of the symptomatology of brain syphilis.

Case 4. A woman of 36 years first noticed dizziness with occasional vomiting on rising in the morning. Soon severe headache was added and during the day she was very sleepy and rather dazed—"daffy," as she expressed it. At about the same time a tendency to go sidewise was noticed and probably a little earlier diplopia appeared. Grad-

ually the headache and hebetude increased and next she became aware that the left hand was clumsy and not so sensitive to hot water as the right. About two months after the beginning of the trouble she had two "falling down spells," after the second of which the left leg was involved; that is, weak and numb. She grew worse for about another month and finally became bedfast. Then she was seized with violent emesis, followed by unconsciousness lasting twenty-four hours. When consciousness returned she had complete left hemiplegia, dysphagia and a hoarse voice. On active specific treatment she made an almost complete recovery.

Case 5. On September 13, 1901, I saw at his home a young man of 22 years who for a week had been suffering day and night with severe headache and had then become dull and stupid, then soporous and finally almost unconscious. He had vomited once the day before. Although profoundly stuporous the patient was finally aroused and was then able to walk, though dizzy, and to give me a fairly good history. He complained bitterly of headache. There was no fever, and no paralysis but the deep reflexes were all exaggerated and on the left side there was an imperfect Babinski reflex. The right optic disc showed slight optic neuritis. On inunctions of mercury and full doses of potassium iodide he made an uninterrupted recovery.

Case 6. In March, 1889, I was consulted by a healthy and vigorous young man who presented a typical Hunterian chancre. In spite of my prohibition he cohabited with his fiancée, she became pregnant, they were married. She miscarried the following December and again in April. Both parents had been put on mixed treatment and in March, 1891, the mother was delivered of a full-term healthy child. The father never had been faithful in carrying out the treatment and in July, 1891, had a epileptoid fit, in which he fell and became unconscious. Within a few days he had had two more. Results of examination were negative except that the right pupil reacted to light less than did the left and the tongue was tremulous. He was put on specific treatment, had no re-

turn of the attacks and has remained well ever since.

Case 7. During a short spree a young married man contracted syphilis. As soon as the initial sore appeared he consulted his family physician who put him on mercury protiodide, which he took faithfully. After a couple of months while still taking the mercury in the prescribed dose, he began to suffer with severe headaches. Four months after the chancre, while on his way down town, the right hand and arm suddenly began to twitch and jerk. He caught the right hand with the left and held it for a few minutes, when the movements ceased. A few minutes later on attempting to transact some business, he found that speech was indistinct and that he could scarcely sign his name. These symptoms rapidly improved, but two days later he became worse. The hand was continuously clumsy, speech was uncertain and the leg was slightly involved. When I saw him the next day there were distinct paresis and incoordination of the right hand, slight paresis of face and leg and slight but unmistakable aphasia. On inunctions and large doses of iodide he made a rapid and complete recovery.

Case 8. A man 43 years old had a slight stroke with aphasia lasting for twenty-four hours. Twenty months later he had a similar attack. About three months after this, on account of headache, he consulted an oculist who found a low degree of hypermetropia and astigmatism. With correction vision was normal. The glasses did not relieve the headache and five weeks later after the examination he accidentally discovered that vision of the right eye was greatly reduced. I saw him three days later and vision was then still further reduced. Examination showed that the amblyopia was of organic origin, that the pupil reacted imperfectly to light and that the visual fields for color were contracted. Otherwise, results of examination were entirely negative. He made a perfect recovery on specific treatment.

Case 9. Mrs. B., aged 30 years, was first seen January 9, 1896. Seven weeks before, her head had begun to feel heavy and numb and when she combed her hair the scalp felt

numb and queer. There was no severe headache. Five weeks before, speech had become difficult and nasal and the left side of the face had rapidly become numb, both subjectively and objectively. The sister noticed that the face drew to one side. At the same time the right leg and then the right arm became weak and numb. The right extremities were the seat of a burning sensation, and later this extended to the left side of the face and throat. A few days after the onset, deglutition became difficult and fluids returned through the nose. When seen there was a good deal of drowsy hebetude. Crossed paralysis was distinct, though not marked, and the soft palate was paralyzed on the left. Anesthesia of the left velum and tongue was distinct; slight on the lower left face. Inunctions of mercury and large doses of iodide cleared up all symptoms.

Five years later, having remained well in the interval, this patient consulted me again for a return of the old symptoms. Sixteen days before, she had begun to suffer from slight dizziness, general languor and difficulty of mastication. Two days later nausea and vomiting appeared and lasted for two days. Then the right arm and leg became numb and weak and the hand and foot hypersensitive to touch, heat and cold. A few days before coming to me the left half of the tongue had begun to feel scalded and the left face numb. On examination the condition was found to be much like that of five years before, though less in degree. The motor root of the left fifth nerve was distinctly involved. The right half of the tongue was badly coated, the left clean. Although she was less seriously ill than the first time, she responded less promptly to treatment. However, on active inunctions and large doses of iodide she made a good but not complete recovery.

Case 10. T. K., 38 years old, had acquired syphilis fourteen years before. He was treated for six months. Eighteen months after the primary sore a large dry scab appeared on the left calf. This was cured by specific treatment. About five years later a lesion of the elbow developed—apparently a periostitis. Three years before I saw him he had an ulcer on the forearm. This also

healed under iodide. About a year before my examination he had begun to run down in general health and five months before had had an attack of unconsciousness. A week after this he suddenly became dizzy and faint for a few moments. Eleven days after the first fit he had a more serious attack which began with paresthesia of the left lip and left side of the mouth; then the head began to jerk and turn and in a few minutes he lost consciousness. When he recovered consciousness the left side of the face and the left arm were partially paralyzed. Anti-syphilitic treatment caused great improvement but he never completely recovered.

Case 11. Early in October, 1896, I saw Miss M. H., aged 27, unmarried. Six months before she had had a diplopia for about a week. It had been caused by the left eye turning in. At the same time the pupil was large. Four months later the same trouble returned, and had continued to grow worse up to the time when she was sent to me. For a couple of weeks she had been troubled with pain over the left eye and with backache, and for a longer time had had difficulty in controlling the bladder. Examination revealed paresis of the left external rectus and a dilated pupil, which reacted to light; vision of this eye was 20-200. The right eye was normal. There was some ataxia in walking. The deep reflexes were exaggerated, sensation normal. I concluded that the amblyopia was functional and a few applications of static electricity brought vision to 20-20.

Inunctions of mercury and large doses of iodide brought gradual improvement and finally cure, except that intoxicants would bring back the diplopia. It may be worthy of note that I was unable to salivate this patient even with inunctions *t. i. d.*, and 1-32 grain of biniodide equally frequently.

After a couple of years the same trouble returned and proved more rebellious to treatment, a complete cure not being attainable. Some two years from this time she contracted tuberculosis and left the city.

Case 12. I venture to relate a little more in detail as it is unusually instructive. The patient, a man of 34 years, was seen August

27, 1897. In January of the same year a sore had appeared at one side of the frenum preputii, the period of incubation having been four weeks. It was a slight erosion, neither painful, large nor excavated. Glands in the groin were enlarged and tender. His physician called the sore a chancroid, treated it locally but gave him some medicine internally for "the lumps in the groin." About three weeks later macules appeared on the palms and papules on the face and body. These "looked like hives but did not itch," and on the body they became somewhat scaly. The chancre healed in six or seven weeks and the rash disappeared at about the same time, the doctor seeing the last of it and saying "no syphilis." Not long afterward the patient had what was called grippé. He had pains all over and a sore throat which continued for some weeks. About the middle of March severe and constant headache appeared. It was not worse at night but was bad enough to keep him awake.

This headache was terminated April 18, three months after the chancre, by an apoplectic attack. While engaged in conversation with a friend he suddenly noticed that he talked "nonsense." "The right words didn't come," and he felt heavy and dull. He felt and acted as if intoxicated and so retired. In going to the bed he walked poorly and after he was in bed the extremities felt heavy. The next day he walked with little difficulty but the feet tended to drag. One side seemed about like the other. Ten days later he had a second attack in which he fell and there was some muscular twitching but no loss of consciousness. Five days after this he had a similar seizure, from which he rapidly recovered and had continued to improve since.

At the time of my examination there was no headache and he slept well. Gait, sensation, strength and coordination were apparently normal, but he could stand on the left foot and rise on the toe better than on the right. The most obvious difficulty, to both patient and observer, was some lack of fluency in speaking. Articulation was good but the right words came slowly and occasionally he had to change a phrase so as to express himself. In other words, he presented slight

but unmistakable motor aphasia. The deep reflexes were exaggerated but equal on the two sides. Examination of the fundi oculorum disclosed double optic neuritis of low degree. An unmistakable syphilitic sore throat was still present and also a small mucous patch inside one lip.

I saw this patient but the once but such information as I have been able to obtain indicates that he made a complete recovery.

Case 13. Is just mentioned because it was not one of syphilis of the brain, although sent to me as such. The patient, a man of 34 years, had contracted a venereal sore four years before, which was treated locally and healed in three or four weeks. A year later a sore appeared over the coccyx, which his doctor said was syphilitic and which healed promptly. A year after that a sore appeared on the penis and one in the mouth, also declared to be specific and cured in six weeks. About eight months prior to my examination another sore came on the penis and lumps on the head. These also yielded quickly to treatment, but a month later pain in the head developed and he went to another doctor, who said "nonsense" and evidently gave him a placebo. This did no good but later the headache abated somewhat until a week before he was sent to me, when it became much more severe, though not worse at night. The physician to whom he then went made a diagnosis of brain syphilis and put him on protiodide pills. As there was no improvement at the end of a week, I was asked to examine him. There was no evidence whatever of involvement of the nervous system but one very large diffuse and one smaller node on the skull which were exquisitely tender to pressure and percussion were easily located. Another tender node was found on the manubrium sterni.

Needless to say, he made a rapid and complete recovery on inunctions of mercury and full doses of potassium iodide.

SURGEON'S CHARGES.

"I hear you're dissatisfied with your doctor's bill."

"Yes. I don't think he's entitled to \$250 for that operation."

"Why not?"

"Because if he was he'd claim more."—Philadelphia Public Ledger.

THE CIRCULATION IN THE LABYRINTH OF THE EAR.*

BY GEORGE E. SHAMBAUGH, M. D., CHICAGO.

Instructor in Anatomy of the Ear, Nose and Throat, University of Chicago. Associate in Otology, Rush Medical College.

The intricate system of cavities that make up the labyrinth of the ear renders the study of its blood-supply by ordinary methods a very difficult problem, and there has always been considerable uncertainty and difference of opinion among anatomists in regard to the course of these blood-vessels.

In order to get a correct understanding of the complicated blood-vessels found in the labyrinth of the adult ear. I undertook to work out the development of these vessels in the hope that the simpler arrangement found in the young embryos would help to interpret the more intricate system of the adult ear. The large number of preparations required for this work rendered the use of human material impractical, for this reason the work was done with the embryo of the domestic pig.

The method chiefly relied upon in this work was that of making celloidin casts of the labyrinth in which the blood-vessels had been previously injected. Such casts when cleared in creosote become quite transparent, except as the intricate network of the vessels in the older embryos obstructs, and when studied through the stereoscopic microscope give a beautiful picture of the blood-supply in its entirety.† In injecting the vessels of the labyrinth in the embryo, many preparations were rendered useless, either because the pressure used was not enough to force the injecting fluid into the labyrinthine vessels, or because the pressure was too great for the delicate vessel walls, and the preparation was ruined by the escape of the injecting fluid into the surrounding tissue. It was found impossible to always gauge accurately the amount of pressure necessary to suit the dif-

*Presented at Fifty-third Annual Meeting, Chicago, May 30, 1903.

†Details in regard to the technic employed in making these casts, with eight full page plates of illustrations in colors, appears in the full report of this work which is published in the Decennial Publications of the University of Chicago, Vol. X. The article is also issued as a separate monograph by the University of Chicago Press.

ferent ages, and it became necessary to inject a large number of embryos from which were selected those that proved satisfactory for study. Altogether over 500 embryos were injected, and from this number scarcely more than 100 specimens proved suitable for study. Among these were preparations showing all degrees of injection, from the perfectly injected labyrinth having a complete capillary injection to the semi-injected ones and those having only the larger trunks injected. In some there was a perfect injection of the arterial tree alone up to the point where it breaks up into capillaries, and in several preparations there was a similar injection of the venous tree. These latter preparations have been invaluable for determining the general scheme of the course of the arterial and venous streams through the labyrinth, which in the completely injected preparation is often quite obscured by the dense capillary injection about them. On the other hand, from this large number of injections, the completeness with which the capillaries were filled in a few of the preparations gave an opportunity for filling out with perfect accuracy this link between the arteries and veins.

The points of special interest in the blood-vessels of the labyrinth as found in the ear of the pig may be expressed briefly as follows:

1. The several divisions of the labyrinthine artery which go to supply the cochlea anastomose freely with each other through a number of anastomotic loops or arcades at the base of the cochlea, thus insuring for each part a blood-supply reinforced freely from each division.

2. The arterial supply to the cochlea is arranged on such a plan that, as a rule, the vessels which send out the arteries to supply the scala vestibuli of a coil send out another set of arteries which supply the lamina spiralis of the coil next above. The arrangement usually described for the human ear, where the arteries for the scala vestibuli and for the lamina spiralis of the same coil come from the same vessels, is found in the cochlea of the pig's ear, but only as the exception.

3. The venous blood of the cochlea drains entirely into the vena canaliculi cochleae. The veins from the ligamentum spirale of the first half of the basal coil are collected into a large trunk which runs along the middle of the under surface of the basal coil to empty into the vena canaliculi cochleae. The veins from the remainder of the basal coil are collected into the posterior spiral vein which runs along the posterior inner margin of the coil.

4. The venous blood from the upper coils of the cochlea is collected by a tributary of the posterior spiral vein. This vein in its beginning follows the spiral direction of the upper coil. It then passes directly downward through the modiolus to join the posterior spiral vein, receiving tributaries from the upper coils which converge toward this central vessel. The anterior spiral vein which Siebenmann found in the cochlea of the human ear does not exist in the ear of the pig.

5. The veins which lie between the coils of the cochlea are supplied by two sets of tributaries, one of which collects the blood from the scala vestibuli of the coil beneath; the other sets collects the blood from the scala tympani of the coil above.

6. The so-called spiral veins of the cochlea, which are usually described as running under the tunnel of Corti, in the crista spiralis, in the crista of the ligamentum spirale, and in the prominentia spiralis, are formed in the ear of the pig from capillary loops which form the boundary line for distinct capillary areas in these parts.

7. There was often found in the cochlea of the pig's ear a connection between the vessels of the lamina spiralis and those of the ligamentum spirale. This connecting link consisted of straight veins which ran from the terminal loops under the tunnel of Corti across to the veins in the crista of the ligamentum spirale, and were found in the terminal as well as in the basal coil.

8. The arterial supply for the vestibule and the semicircular canals comes in part from the anterior vestibular artery, and in part from arteries which spring from the

anastomotic loops between the arterial trunks which supply the cochlea.

9. The venous blood from the vestibule and the semicircular canals is collected into two large trunks which empty into the vena canaliculi cochleae. This is in striking contrast to the condition found by Siebenmann and Eichler in the human ear, where the veins from the semicircular canals left the labyrinth with the aquaeductus vestibuli.

10. The capillaries are distributed almost exclusively to the membranous labyrinth. In the semicircular canals this is shown the most clearly. Here the capillaries surround the membranous canal while the veins run along its inner concave surface, and the artery, for the most part, clings to the inner concave surface of the osseous canal, sending an occasional twig to the capillary loops around the membranous tube.

11. The capillary loops of the membranous semicircular canals do not, as a rule, completely surround this tube, but leave a zone along its convex surface free from vessels except for an occasional connecting loop which runs along this space.

Discussion.

L. Harrison Mettler, Chicago: I wish the doctor could have dwelt a little more upon the relationship of the circulation in the internal ear and its alteration, or hemorrhage, in Meniere's disease. I hope that later in this discussion we will hear from some of the aurists on this subject. After seeing this very beautiful demonstration and the pictures I am more convinced than ever that the position I took a number of years ago is at least partly true. That we are enlarging too much our conception of Meniere's disease. In looking over Meniere's own paper, which reports some eleven cases only one of which was postmortemed, I find that he found a hemorrhage in the labyrinth of this case, and even in that other lesions at the base of the brain were found. Since that time Dr. Herman Knapp of New York has written probably the second best paper on this subject, in which he enlarged on Meniere's ideas and stated that many forms of ear disease give rise to Meniere's symptom complex. Since Knapp's paper I notice that there is a strong tendency to associate vertigo with very many forms of ear disease, even middle ear disease. In some papers I have seen it attributed to disease of the external ear, such as wax in the external auditory canal. I think that we should limit our term, and understand just what is meant by the term Meniere's disease. There have not been many post mortems made of these cases, and in only a very small number of them has it been proven absolutely that hemorrhage into the semi-circular canals

was the single and only symptom. Taking these findings into consideration, and remembering the views that have just been presented to us by Dr. Shambaugh of the marvelous anastomosis and windings of the blood vessels as we find them at the base of the brain in connection with the circle of Willis, showing that the tendency to hemorrhage would probably be very small on account of this richness of blood supply, it seems to me that we should go slow in diagnosing every so-called symptom complex as being due to labyrinthian disease, and especially hemorrhage? Looking at the subject from that standpoint I think that Gowers has gone too far in his great work when he says that in probably 80 per cent of all cases of vertigo we find ear disease, thereby eliminating from his consideration the stomach, eye and other organs as causes of vertigo. I think that his statement is a little too broad, it should be modified considerably.

Therefore, I should like to hear from the aurists as to what is meant by Meniere's symptom complex or disease, and whether Meniere himself did not mean hemorrhage into the labyrinth. If he did we are doing wrong in attributing all forms of vertigo or many forms of vertigo to other diseases of the ear, and certainly we are doing wrong in assigning so many of these vertigos to ear disease and not to other causes as is in all probability correct.

Vertigo is a complex symptom. It is the result of a disturbance of the aural apparatus or its equilibrium as the result of peripheral sensations of all kinds; therefore, vertigo may arise from the eye, stomach and other sources of irritations. In addition to these causes we may also have irritations in the labyrinth aside from hemorrhage that may give rise to vertigo and loss of hearing. But in some of these cases I believe we should not stop and make a diagnosis of Meniere's disease and jump to the conclusion that we have had a hemorrhage in the labyrinth, for in some of these cases we will find on closer inspection a pathology of some central basis, such as hemorrhage of syphilitic origin or whatever it may be. We should not jump to the conclusion that every case of loss of hearing and vertigo is a case of Meniere's disease, and I think that these pictures which Dr. Shambaugh has shown us uphold the position which I take.

CLINICAL OBSERVATIONS ON ARTERIOSCLEROSIS.*

BY CHARLES A. ELLIOTT, M. D., CHICAGO.

Instructor in Clinical Medicine, Northwestern University Medical School.

A consideration of organic arterial disease cannot be monopolized by a description of the changes in the blood vessels; no more should we seek for its clinical manifestations in the cardio-vascular system alone. It is as varied in its clinical manifestations as it is

*Read at 53d Annual Meeting, Chicago, May 30, 1903

widespread in its pathological changes. Many of the parenchymatous organs may be more or less affected by the same etiological factor that causes the arterial degeneration, and this parenchymatous degeneration is always hastened later by a poor blood supply delivered through impermeable sclerosed arteries.

The frequent association in the same patient of for example, chronic interstitial nephritis, emphysema and chronic myocardial changes with arteriosclerosis, leads one to consider them as different manifestations of the same disease, a disease which is wide spread in its pathological changes and undoubtedly due to some widely circulating toxemia. Since Gull and Sutton first described arterio-capillary fibrosis as an independent disease, many of the processes which were then considered diseases of single organs, are now understood to be different manifestations of a wide spread tissue change. The mooted question as to whether arteriosclerosis on the one hand or chronic interstitial nephritis or emphysema on the other, is to be considered the primary affection, must be settled it seems to me, by considering none of them primary, when thus associated, but all the reaction of the tissues to some widely circulating toxine, the process in the various organs being of a uniform type varying no doubt in degree but not in kind.

Many cases die unrecognized. Diseases of the heart, cerebral hemorrhage and thrombosis, aneurism, Bright's disease, and emphysema usurping its place upon the mortality records. Considering only the diseases that are manifestly due to arterial degeneration and associated with the accident of arterial rupture, it is one of the foremost causes of death. It is not only alone one of the chief causes of death, but where arteriosclerosis is present in patients suffering from other diseases, it must be considered as a menacing factor in the case and must be accounted with in making up the man's account. It is safe to say, that arteriosclerosis not only has a far greater percentage of death than is generally accredited to it, but also that it receives hardly a fraction of the attention that is justly due to it. It is usually overlooked as a disease per se, and

one of its resulting conditions such as nephritis or valvular disease absorbs the entire attention in the case, while the blood vessels which are equally affected if not in fact the cause of the ascribed condition, are overlooked or entirely neglected.

The causes of arteriosclerosis are vague and uncertain, yet must in general be considered toxic in character. Among the most important may be catalogued such potent yet ill understood factors as: (1) *Infection*. Bacteria exerting their influence by means of chemical irritation, as seems clear from the experiments of Buchner in which he found that the products of life of bacteria cause the same pathological changes as do the living bacteria themselves. (2) *Faulty metabolism* is undoubtedly a potent factor and should be considered of prime importance. (3) *Defective elimination*. Under this head may be considered the arteriosclerosis that occurs in advanced age which is probably due to atrophy of the organs of elimination. (4) *Stress and strain* are undoubtedly important yet obscure factors. (5) *Overwork and worry*, which tell severely upon many individuals is considered by some as a potent factor in the production of arteriosclerosis. (6) *Alcoholism* must be considered a frequent causal factor in the production of arterial degeneration.

In a word, the etiological factors back of arteriosclerosis are toxic in character. One thing is certain and that is, the arterial thickening is a conservative process and is not the cause of the disease, but rather the expression of the reaction of the vessel wall to a toxic irritation—it is a conservative process that repairs and strengthens the injured vessels walls. The medical dispensaries are especially favored with these cases and I think it is largely because these etiological factors are more apt to be active among the poor of the city. It is no uncommon thing to see the effect of alcoholism, overwork and syphilis manifested by arteriosclerosis, emphysema and broken compensation in the same dispensary patient. In fact this combination is rather frequent.

Three stages in the development of arteriosclerosis may be readily outlined—a division which is of value clinically as well as

from a pathological standpoint. (1) Stage of vaso-motor or functional contraction of the vessels excited by toxæmia. The heart becoming hypertrophied to compensate for the increased work put upon it by the high arterial pressure thus produced, little or no organic change having taken place in the arteries. (2) A stage of arterial thickening, compensatory in nature, supporting and strengthening the weakened arterial wall. The heart becoming much hypertrophied. (3) The period of broken compensation; the heart having reached the limit of its nutritive possibility, sufficient nourishment cannot be supplied the myocardium through the sclerosed coronary vessels to allow the heart's further hypertrophy to meet the demand of the advancing arteriosclerosis. Degeneration of the heart muscle sets in, the heart becoming dilated, and the symptoms of incompen-sation are manifested.

The *symptoms* of arteriosclerosis are in general those of high arterial tension. They are insidious in onset but progressive. During the early stages of vaso-motor contraction, the symptoms of the latter period of organic change are foreshadowed, these patients complaining of precordial throbbing, headache, vertigo, epistaxis, and other evidences of high arterial tension. Later the arteries become organically hardened which is evidenced by hard pulse, ulnar pulsation may be visible and the temporals will be noticed to throb. A "locomotive brachial" may be present, which upon palpating the length of the artery may be felt to be broken into segments with flexible intersections, such a locomotive brachial may be present in one arm only as was observed in one dispensary case.

The accentuation of the *second aortic sound* is of much value as a diagnostic sign. This may be heard at times over the whole precordia, and with a characteristic clangor in the interscapular region posteriorly, as pointed out by Friedman. An accentuated *second pulmonic* sound occurs almost as constantly if not quite so evident as does that of the aortic interspace. This is due no doubt to an accompanying emphysema in many cases as well as to arterial changes in the lungs. *Potential symptoms* due to the

accident of arterial rupture may appear at any time, such as cerebral hemorrhage, retinal hemorrhage, hæmoptysis and epitaxis. Aside from these the symptoms vary according to the organs most affected; the signs and symptoms of chronic nephritis, emphysema, or chronic myocardial or valvular disease may be present.

As far as the *treatment* of arteriosclerosis is concerned, much can be done for patients suffering from this disease, by recognizing arteriosclerosis and its associated conditions as a disease in itself, much depending upon establishing this point of view since only by relieving the high arterial tension can one hope to put a stop to the chronic changes in the myocardium, kidney parenchymata, and other structures which are being improperly nourished. It will not do to treat the chronic sclerosed kidney or fatty heart muscle without first recognizing the fact that these conditions are being augmented if indeed not caused by the arteriosclerosis.

It is surprising how much can be done with these patients toward relieving their symptoms. One cannot hope to absorb an organic deposit in the arterial wall, and in that sense the disease is incurable, but one can in many cases control their symptoms and at least relieve them, and in that sense the disease is distinctly amenable to treatment.

The rational treatment of arteriosclerosis should be instituted with two ends in view: (1) The early elimination of the underlying toxæmia before great organic change has taken place over an extensive area of the arterio-capillary system. (2) The reduction of the high arterial blood pressure.

To accomplish the first end requires a thorough over-hauling of the man's habit of life. He should know just how his account stands so that he may work and live according to it. If he is an alcoholic, alcohol should be interdicted, if an excessive user of tobacco, it should be moderated; if a high liver, his diet must be regulated; if living under heavy mental strain, less mental exertion and more bodily exercise should be indulged in. Heavy physical exertion must give place to hours of repose and a chance for recuperation. *Moderation* then in every department of life

should be his watchword. The regulation of the hygienic conditions and diet are of prime importance. The diet should be greatly *restricted* and simple in character, the idea being not to allow a patient more food than is required to furnish fuel for his metabolic processes.

The *medicinal* treatment should be directed primarily toward reducing high blood pressure, and much is to be gained by accomplishing this:

(1) It relieves the heart of a great amount of work; considerable increase in cardiac work being required to pump blood into an already over distended arterial system.

(2) Reducing the arterial tension increases the nutritive possibilities of the heart muscle, reducing the amount of cardiac work *relatively* increases its nourishment; the idea being to put off cardiac failure.

(3) Reducing the blood pressures relieves symptoms, such as vertigo, dyspnoea, palpitation, throbbing of the precordium and epigastrium, and of the temporal and cerebral arteries.

(4) Reducing the blood pressure reduces the amount of stress and strain upon the whole cardio-vascular system, in this way eliminating in part at least one of the conceded etiological factors in producing this disease.

To accomplish this reduction in blood pressure *nitro-glycerine* and the *iodides* seem to be the drugs of greatest value. Nitro-glycerine is the more useful, it acts by dilating the functionality contracted arterioles that are not rigid with organic change, there usually being enough of the latter present to materially reduce blood pressure. Nitro-glycerine unloads the heart, for the time being at least, and allows it an opportunity to gain strength and in this way its effects are lasting. Some patients are extremely tolerant to its use taking large doses over long periods of time with benefit. In one patient under observation, nitro-glycerine seems to control an enlarged prostate, the element of high blood pressure in this case seems to be the determining factor which caused the prostate to enlarge sufficiently to cause retention of urine, as was demonstrated upon

two occasions when nitro-glycerine was withheld and the retention of urine returned.

On the whole the *outlook* for these patients is unfavorable, the disease being progressive in nature, but much can be done toward arresting its progress if it is recognized in the early stages of functional high pressure, before great *organic* change has taken place, and a great deal may be accomplished later by relieving the distressing symptoms produced by high arterial tension. Much is gained by recognizing and treating the arterial element of the disease in cases where the cardiac or renal condition seems to overshadow that of the arteries.

L. Harrison Mettler, Chicago: I wish to emphasize what I consider a very valuable and practical point that was just intimated by Dr. Mix in his paper. In regard to arterio-sclerosis and its results in relation to apoplexy. I presume all of us feel that one of the most difficult situations in which we are placed as practitioners is to know exactly what to do in a case of cerebral apoplexy, that is, when we see the case very soon after the stroke. In an apoplexy or stroke when it occurs, for instance, in a young man, and when it occurs associated with venereal disease, when it occurs with syphilis, most of us can jump at a diagnosis—a septic embolic obstruction. On the other hand, if it occurs in an older person, associated with certain constitutional traits or probably after strain, etc., we too often jump to the conclusion that it is hemorrhage. Now, when we stop to think, the treatment of these two conditions is so different in nearly all its particulars. Take, for instance, the simple question of position alone. In hemorrhage the man should be slightly elevated. Haidenhain comes to the question of putting the patient in the vertical position. Whereas, in embolism you want to get them as low as possible to block the embolic obstruction.

Then think for a moment of the medicinal agents you wish to use in these two conditions. In hemorrhage the cardiac sedatives are indicated; whereas in embolism you use cardiac stimulants. In hemorrhage you deplete the bowels, and in embolism you reverse this order of procedure. When you think of these different lines of treatment you are called upon to make a very rapid decision in these cases, and it may mean a great deal to the life of the patient. Therefore, one of the most difficult positions in which we are placed is to make a differential diagnosis in apoplexy. Sometimes it is very easy, and at other times it is extremely difficult. The difficult cases are those where we must differentiate between a thrombotic obstruction as the result of a trauma, and arterio-sclerosis and hemorrhage in the old men. A different line of treatment must be adopted in each of these two conditions, and you must decide quickly and positively. There is one of

the most difficult positions in which we are liable to be placed, knowing what to do, or, rather, knowing just how to make a diagnosis quickly between obstruction of thrombotic origin and hemorrhage in the old man, and where the other signs are relatively or comparatively insignificant so far as deriving any clue or assistance from them is concerned.

Dr. Mix brought out an extremely valuable clinical point, or just hinted at it: That the condition of the arteries will help a great deal towards making this differential diagnosis. If, for instance, the hemorrhagic signs, as distinguished from the signs of thrombotic obstruction, are very slight or comparatively imperceptible, it will go a long way towards helping in this condition if we recognize the fact that the patient is suffering with arteriosclerosis or an atheromatous condition. I am surprised that atheroma of the blood vessels is so frequently considered a source of cerebral hemorrhage by the bulk of the profession. I have met it a number of times. Charcot, Bouchard and others have clearly shown that hemorrhage, nine times out of ten, or in the majority of cases is due to miliary aneurysm. That is the cause of hemorrhage. Occasionally you have hemorrhage as the result of a weakened blood-vessel and atheroma; but, as a rule, when you have this condition the chances are that you have thrombosis or secondary embolism following thrombosis. I am very glad that Dr. Mix spoke of that. That in this condition the hemorrhage is not so frequent as seems to be so universally suspected, and it seems to me that that is a very valuable clinical suggestion in helping us to make a rapid and correct differential diagnosis and thereby modifying our treatment as between hemorrhage and thrombotic obstruction in these cases of apoplexy in old age.

Hugh T. Patrick, Chicago: Dr. Mix's paper is a very valuable one. He knows what he is talking about. I simply want to make a few suggestions along practical lines and as being supplementary to his paper. The more I study the pathology of arteriosclerosis the less can I come to any definite conclusions. Arteriosclerosis very rarely affects all parts of the arterial system equally. When one is looking for it, trying to ascertain whether it is present and whether it accounts for the symptoms that are present, it is necessary to examine all the arteries that are open for examination. Too often the physician feels one radial and looks at both temporals and is satisfied. That won't do. We must examine all the arteries open to palpation. Particularly, and very particularly, should we examine the two dorsal arteries of the feet, and the two arteries below the internal malleolus, because these arteries very often show the condition when it cannot be seen nor felt elsewhere. It is not at all unusual for the pulse to be wanting in one foot. Therefore, it is necessary to examine both the *arteria dorsalis pedis* and the one below the internal malleolus. In my experience I find that the two are compensatory as regards size. The dorsal artery normally is small and has a small pulse. In that case the artery below the malleolus is large and has a large full pulse. Sometimes the dor-

sal artery is very small and thin, often escaping the palpating finger; the artery below the malleolus is then in just the opposite condition. But in the presence of arteriosclerosis both of these arteries may be found to be without pulse, a very valuable indication.

Then particularly the carotids are to be examined. I do not know how many cases I have seen in which the carotids were not looked at at all and yet the diagnosis was made without ascertaining that another palpable artery was involved, and yet the carotids show it very well; sometimes both and sometimes only one.

Heredity plays a very strong role in arteriosclerosis. It is one of the most potent causes in the production of arteriosclerosis. There is no question about it, that arteriosclerosis occurring at a comparatively early age and apparently without an adequate cause is very often of hereditary origin. Then stress or mental effort, and also physical effort ought to be classed along with that, and especially the two combined. In my experience it is not the men or women who lead a placid, comfortable, easy, well-fed existence, the men with short neck and plenty of food, who get arteriosclerosis. It is the hard-working, strenuous chaps who will work all day and think of their business after they get to bed; the man who starts out in life as a field hand and winds up as the head of some big corporation or institution while he is still in middle life, and just as he gets ready to gather the fruits of his efforts, his economy, his careful dealing, then he gets arteriosclerosis and is laid on the shelf. It is the active, pushing, hard-working business man, working early and late; he gets a competence and then breaks down. Those are the men who get arteriosclerosis; the men who lead a strenuous life; mental and physical strain are more often the cause of arteriosclerosis than alcohol, beef, lead, arsenic, tobacco, etc.

I know that Dr. Mix would have said more about the heart if he had had more time. In my opinion the heart is the biggest factor in the symptomatology of arteriosclerosis. Not a heart murmur, but a weak, flabby heart, usually called a myocarditis; it cannot do its work although it is otherwise competent. How many times I have had my patients run up and down my office a number of times, although it strikes one as an imposition and a ridiculous thing that we should have them do that, yet it is of vast importance to see whether or not the heart is competent or weak. We must see how the heart does its work.

Lastly apoplexy does not mean hemorrhage. Thrombosis is very, very, very much more frequent than hemorrhage. If you take only the sudden, awfully severe, rapidly fatal cases, only one stroke and that the last, where the patient dies in from ten to twenty-four hours afterward that is hemorrhage. But as a rule a little stroke, or a threatening stroke, a little numbness, a little sleep in the daytime and none at night; numbness in the toes, little things going wrong; worrying over little things and not concerned about big ones: all these premonitory signs and then another little stroke and yet another little one, that is thrombosis and not hemorrhage. That is what gives the doctor his cue in these

cases and gives him an opportunity to outline his treatment so that he can avoid any subsequent trouble in the way of a sudden and fatal ending.

Maximilian Herzog, Chicago: It seems to me that the clinicians look upon arteriosclerosis as is probable in the majority of cases a primary little differently from the pathologist. I take exception to one statement, that arteriosclerosis condition, that it is a disease *per se*. I do not believe that that is true. I believe that if you analyze arteriosclerosis you will find that in the majority of cases it is due to syphilis or an intoxication; among these alcohol and probably that intoxication, indefinite in nature, called the uric acid diathesis. Syphilis in its very nature must lead to arteriosclerosis because the very earliest changes in syphilis are those occurring in the arteries, veins and lymphatics. In these cases there is a subendothelial proliferative process. Now, if these processes lead to the formation of connective tissue, they lead to true arteriosclerosis. If they lead to a softening process, a degeneration, instead, then, of course, an aneurysm is the result. But it seems to me that arteriosclerosis and aneurysm are in the majority of cases always secondary and that is the point I wish to make. So that we cannot, *ipso facto*, look upon arteriosclerosis as a disease *per se*.

It seems to me that we can lay down a general treatment. We must try to correct the underlying condition, the syphilis, the uric acid diathesis or any other intoxication, and then you will find that you will not have arteriosclerosis. But it is wrong to consider arteriosclerosis as a primary condition because it interferes with proper treatment. We are liable to overlook the cause of the trouble.

Charles J. Lewis, Chicago: In the discussion of the clinical observations of arteriosclerosis it was stated that as causative factors toxins were probably paramount. I regard this condition as a change in the normal structure of the arterial wall. This change is brought about by still another change in the lumen of the artery. These arteries at the very beginning of the change are affected by the accompanying nerves; they are contracted, and if the toxin is affective, is causative, then it is through impulses traveling along the sympathetic fibres in the wall of the vessel. This process continuing there are gradual interstitial changes produced, until finally there is such a change in the vessel wall that the calcium salts are precipitated, also other matters, that bring about the condition generally known as arteriosclerosis.

So that we have here as a factor, first, the irritant traveling along in the sheath of the blood vessel. This is true, and the poison may be syphilis, alcohol or other poisons, but here is the very beginning of the process that finally leads to such terrible consequences.

John Palmer Matthews, Carlinville: In the handling of the old soldiers in the Pension Department there are two laws governing the granting of pensions; first, granting pensions for disability acquired during the war; second to those being unable to perform manual labor because of a dilated heart, inability on the part of

the kidneys to eliminate poisons which cause pains and aches of rheumatism or the uric acid diathesis, and arteriosclerosis. We are inclined to give them pensions on their age, but we have to give a pathologic description of their condition in order that the Pension Department may be able to act on them. Those three symptoms, hard arteries, dilated heart and insufficient elimination by the kidneys are sufficient, I think, to pass favorably on an increase in pension. I am sure that the members of the Pension Department, who were fortunate enough to be present here today, will appreciate this paper very much.

Dr. Mix (closing the discussion): I am not sure that I have been convinced by Dr. Herzog's remarks because in the preparation of this paper I took the trouble to examine a great deal of the literature on the subject of pathology as that is the basis of the whole subject. I found that there are a number of diseases of the arteries which occur in a number of toxic conditions, and that makes it a little difficult to unravel the arteriosclerotic snarl. Still I think that it is perfectly evident in the literature that there is running all through the miscellaneous cases a group of cases that constitutes a morbid entity and to which the name of arteriosclerosis has well been given. Cases have been reported occurring early in life; cases have been reported in infants of fifteen months; one case of sclerosis of the coronary arteries with angina pectoris in an infant fifteen months old. One case by Chiari of Prague, which is exceedingly interesting; arteriosclerosis in one who used alcohol to excess, a boy of 13. But still an analysis of the cases bandied back and forth among pathologists leads one to believe that there seems to be a consensus of opinion that these cases are not true cases of arteriosclerosis, and that arteriosclerosis previous to the 35th year, of the true type, is exceedingly uncommon.

The differential diagnosis in arteriosclerosis of the late and ordinary type was brought out and the point is made that Kolisko says that so far as he is concerned personally he can pick out the cases of late poisoning and he did it, as I mentioned in my paper where a diagnosis of cerebellar tumor was made which was not confirmed by the autopsy. It was a case of lead poisoning instead. Indeed, it is possible to pick out at least a late arteriosclerosis.

The excuse for this paper was found in a case which I had at the Cook County Hospital. The case was one of a woman who was brought into the hospital in a hemiplegic condition; she was unconscious and remained that way for 48 hours when she died. The eyes were turned to the side of the hemiplegia and on the strength of all this the internes made a diagnosis of cerebellar hemorrhage. They were quite confident of the correctness of their diagnosis and when I disagreed with them they said I was absolutely wrong. We asked for an autopsy and got it. I made no mistake; it was a case of cephalomalacia, although the clinical picture was that of an ordinary case of cerebellar hemorrhage. It will pay those who take the trouble to go to the post mortem of their cases, when they can get it, and see what is there after they have made their diagnosis. That will prove what was brought

out and is the point of my paper: That hemorrhage is very rare in cases of arteriosclerosis, if not almost incompatible with the disease; whereas thrombosis, and to a slight extent embolism arising from a tearing off of a parietal thrombus, or a portion of it, are the rule.

EXAMINATION OF THE URINE AND SEGREGATED URINES AS A MEANS OF DIAGNOSIS IN SURGICAL DISEASES OF THE KIDNEY.

BY M. L. HARRIS, M. D., CHICAGO.

In considering diseases of the kidneys it was natural to look to the urine for evidences of perverted function. Were the urine a fluid normally fixed in amount and in its composition, any deviation from the normal in these respects might be looked upon as indicating some pathologic change in the excreting organs themselves, but such, however, is not the case. The kidneys not only eliminate certain toxic substances which are generated in the body as well as foreign substances introduced from without, but also maintain a normal balance between the amount of the salts taken in with the food and the blood. We may therefore find considerable variations in both a qualitative and quantitative sense in the composition of practically normal urine which do not indicate any pathologic changes in the kidneys, but which are merely expressions of general states or conditions, and for that reason such variations however interesting and important they may be will not concern us at this time.

In all diseases of the kidneys proper there are found in the urine, at one time or another during their course, certain substances or bodies which, owing to the fact that they are not normally present in the urine are termed pathologic. It is to these pathologic products that your attention is first directed. They may be subdivided into four classes:

1. Organized living bodies, or bacteria.
2. Organized bodies normally present in the body but abnormally present in the urine, such as (a) leucocytes in sufficient number to be called pus, (b) red blood cells, (c) numerous epithelial cells from the different parts of the interior of the kidneys, to which

may be added, (d) cells which are not strictly normal, such as occur in tumors, etc.

3. Organic substances, (a) solidified and formed, such as the various kinds of casts, and (b) soluble, such as the various kinds of albumens.

4. Inorganic substances, such as crystals, abnormal owing to size, number, etc., ammonia from decomposition, etc.

In order to detect these various pathologic products, a careful examination of the urine is necessary. It is not the intention to enter into the ordinary methods of urinalysis, but to call attention to some of the more important points and their significance.

As most of the so-called surgical affections of the kidneys are due to micro-organisms, it is important to know the kind of infection present. This means in most cases a bacteriological examination by the usual culture and tinctorial methods. The essential point in this connection is the obtaining of the urine uncontaminated with organisms from external sources. In the female the urine should invariably be obtained by the use of a sterile catheter introduced after proper cleansing of the parts. In the male the same procedure may be used, or if there has been no disease of the lower urinary tract, it is sufficient to urinate, after thoroughly cleansing the urethral opening and discarding the first portion that escapes, into a sterile receptacle, from which inoculation should be made immediately. If there has been an infection of the urethra, this canal should be cleansed as thoroughly as possible by irrigation before attempting to collect the urine. The micro-organisms most frequently found are the bacillus coli commune, bacillus tuberculosis, and the various staphylococci, the streptococcus, the bacillus proteus, and rarely the bacillus typhosis and diplococcus pneumoniae. The effect of the presence of these bacteria on the reaction of the urine varies, so that the reaction of the urine becomes a point of some diagnostic significance. In order to be of value, however, the reaction must be taken at once, as an acid urine may become more acid, or change to alkaline within a short time after it is passed, owing to external contamination. The normal acid re-

action of the urine is not changed by the bacillus coli commune, the bacillus tuberculosis, or the streptococcus, while the staphylococci and the bacillus proteus render the urine alkaline, owing to the decomposition of urea with the formation of ammonium carbonate. In the presence of an alkaline urine it should be determined whether the alkalinity be due to the so called earthy bases, to alkalies introduced medicinally, or to ammonia. If due to ammonia, it indicates an infection with some urea decomposing organism. The tubercle bacillus does not grow on the usual culture media, but is recognized by its peculiar tinctorial properties. In practically all cases of tuberculosis of the kidneys this bacillus may be detected in the urine, if a sufficient number of carefully conducted examinations be made. The possibility of confounding it with the smegma bacillus should be borne in mind and the proper precautions taken. The use of the microscope is absolutely necessary in order to detect the presence of pus or blood in the urine in anything but the most apparent macroscopic quantities. This statement would not have been deemed necessary, did not one still occasionally hear a physician speak of the cloudiness or deposit due to precipitated urates as pus, or the high colored cloudy urine of concentration as due to blood, simply on their appearance. The presence of pus in the urine is always an indication of an infection of some portion of the urinary tract, unless it has ruptured into it accidentally from some neighboring organ. While the kind of infection should always be determined when possible by the culture methods, as already mentioned, still the following points are of practical clinical importance. A pus containing urine, alkaline owing to the presence of ammonia, is probably due to presence of the staphylococcus or proteus. A culture obtained from an acid, pus containing urine is most commonly the colon bacillus. An acid or neutral pus containing urine which remains sterile on ordinary culture media is almost always due to tuberculosis, even though no tubercle bacilli are found on examination. Mixed infections, of course, may exist. Blood in the urine when it comes

from the kidneys is usually due to malignant tumor, tuberculosis or renal calculus.

In malignant tumor most commonly the blood is present in very perceptible amount; it appears intermittently at irregular intervals, without apparent cause, and the urine may be free from it during the intervals.

In tuberculosis the blood may be microscopic or macroscopic in amount. It appears spontaneously and may persist for some time, subject to remissions. More or less pus is almost always present. Later in the process the blood commonly disappears.

In renal calculus the blood is small in amount, may be provoked or increased by rough riding, jolting, violent exercise, jumping, etc., may or may not be accompanied by pus, according to the presence or absence of infection. Rarely renal hematuria is due to an angioma of the pelvis, to so called angioneurotic changes of Klemperer, to chronic nephritis, and, of course, may be present in the early stage of an acute nephritis. The importance in a diagnostic sense of small amounts of blood detected only with the microscope after the use of the centrifuge cannot be too much emphasized.

The presence of casts in the urine is always an indication of inflammatory changes in the kidney substance. Whenever pus is found in appreciable amount, more or less albumen is always present. Albumen may be present greatly in excess of the amount due to the pus and, of course, in the absence of pus, when it is referred to the changes in the kidney tissues.

Crystals when present are of importance only as indicating certain particular decompositions, as the ammonio-magnesium phosphate, or when unusually numerous or large as suggesting the possible presence or nature of renal calculi. Epithelial cells from the pelvis and kidney tubules are always present in greater or less number in all infectious infections of these parts.

So much for the pathology. Were the kidneys the only part of the urinary tract from which they could be obtained, the diagnosis of kidney disease in the majority of cases would be a very simple matter, but such is far from the

case. Bacteria, pus, blood, epithelial cells, albumen, crystals, etc., may all have their origin in other portions of the urinary tract, independently of the kidneys, and their mere presence in the urine gives no indication whatever of their source. Casts alone are unmistakably formed in the kidneys.

The most careful examination of the urine then often furnishes insufficient data upon which to base a correct diagnosis, as to the location of the lesion. The history will frequently make up this deficiency, but only too often do we find this also wanting, when recourse must be had to other means. These are mainly two, namely, cystoscopy, or inspection of the interior of the bladder and the collection of the urine directly from each kidney, separately. The use of the cystoscope is absolutely essential to a correct diagnosis in many diseases of the urinary tract, but this phase of the question will be considered in detail by the next speaker.

Collecting the urine directly from each kidney separately is the greatest advancement which has been made in the diagnosis of surgical renal affections in modern times. There are two practical methods of accomplishing this, namely; the use of the urine segregator and catheterization of the ureters. Each of these methods has its advantages and its limitations. The latter method will be considered in detail by the speaker who follows me.

After quite an extensive experience with the segregator, I can state that its intelligent use in suitable cases furnishes results which are reliable and gratifying. It does not take the place of the cystoscope, but should be used in connection with that instrument. It does not supplant entirely catheterization of the ureters, as there are cases in which the latter is the more suitable, but that it does add a very useful field is certain. The advantage of collecting the urines directly from the kidneys is very great. We are thereby enabled to exclude entirely the lower urinary tract in determining whether the disease of the kidneys is bilateral or unilateral, and the latter, which side is involved in the diagnosis of these affections is

now complete without these facts. As many of the diseases of the kidneys require surgical operations for their cure, or even that one of the organs be sacrificed entirely, the necessity in the latter case of being able to estimate the functional capacity of the remaining organ became at once apparent, for upon this point depends the life or death of the patient.

Before the days of ureteral catheterization and the segregator the determination of this point was practically beyond our power, but now, by an examination of the separate urines we are able to determine the amount of work done by each organ with almost mathematical precision.

In order to do this it is necessary to take into consideration, when examining the urines, the time occupied in their collection; the amount collected from each side; the body weight of the patient; the amount of solids, such as urea, chlorids, etc.

A possible aid in determining the functional activity of the kidneys is the comparative estimation of the amount of sugar eliminated by each during a given time following the introduction into the system of phloridzin, which produces a temporary glycosuria.

The freezing point of a liquid is a direct index of the number of molecules held in solution by that liquid, and this fact, which has been utilized in the examination of the urine, blood, etc., will be considered in detail by a subsequent speaker under its proper title, cryoscopy. That cryoscopy may furnish valuable information no one will deny, but that it at present furnishes us more information, or information of greater value when applied to the urine than can be obtained by other methods of examination remains to be proved.

In conclusion, an examination of the urine in the surgical diseases of the kidneys must take into consideration not only the pathologic constituents, but also the comparative amounts of normal constituents eliminated by each kidney, in order that the proper treatment may be carried out and a correct prognosis given.

REPORT OF TEN AUTOPSIES OF CASES, THE CAUSE OF DEATH BEING LESIONS OF THE ABDOMINAL VISCERA.

P. L. MARKLEY, M. D., ROCKFORD.

Case One: I was called to see a man 45 years of age in August, 1896, and when I arrived at bedside of patient, I found him dead. On inquiry I learned that he had been dead only a few minutes, that he had been sick three days, with what a physician who had been attending him called cholera morbus. Had severe pains all over abdomen, was tympanitic, vomited almost constantly, last 24 hours fecal matter, no bowel movement.

Autopsy: Every organ seemed normal except the first part of ilium, where I found about six inches of the gut twisted upon itself and distended to about double its normal size and perforated, perforation about the size of ordinary slate pencil, signs of septic peritonitis; distended gut somewhat necrotic.

Case Two: Was called to see young man 32 years of age one evening at 7 o'clock, had been taken with severe pains in abdomen at 3 a. m. of same day. Had been in usual health day previous, was fireman in Glucose plant; condition at first visit, severe pain all over abdomen, slightly tympanitic, bowels had not moved, vomited frequently, pulse extremely weak and rapid, 140 per minute; temperature normal; death occurred next day at 10 o'clock, just 32 hours after onset of illness.

Autopsy: Abdomen filled with sero-sanguinous fluid, intestines distended with dark fluid blood, sigmoid flexure caught under the whole mass of small intestines and constricted by the mesentery of small intestines, causing complete obstruction of the bowels. Sigmoid flexure was so long that would reach the board on which the body lay on the right side.

Case Three: Male child, 2 years old. Was taken sick one day while sitting on the floor with severe pain in abdomen. Had been in good health up to this time. Pains came on every hour or two causing the child to cry

severely; short time after first pain bowels moved, discharge consisted of ordinary bowel contents mixed with a little blood and mucus. After this, the child had pain in abdomen from which it would cry out at frequent intervals, i. e., every hour or two for about 36 hours, then pain became almost constant, with occasional exacerbations. Temperature was normal for the first 48 hours after which it became slightly elevated for the next 24 hours, then temperature reached 102 degrees and pulse became weak and rapid. The child vomited frequently from the first but there was no tenesmus at any time. Bowels moved slightly several times, the discharge being mixed with mucus. Diagnosis intussusception, operation refused. Child died on the sixth day.

Autopsy: No tumor could be detected before abdomen was opened. A mass about six inches long and one inch in diameter was found in region of caecum which proved to be the ilium which was invaginated into the caecum and colon to the extent of about six inches. The ilium was easily removed from the colon by gentle traction as there were no adhesions, but the invaginated gut was slightly gangrenous.

Case Four: Male child, one and one-half years old was taken suddenly sick with severe pain in abdomen accompanied by nausea and vomiting and distention of bowels with gas. Bowels moved slightly two or three times after copious enemas of warm water, but no blood and only a small amount of mucus. There was no tenesmus. The most distressing symptoms in this case was vomiting and pain. The temperature raised slightly above normal soon after onset of disease and just before the child's death, which occurred 48 hours after onset of illness, temperature was at 102° F. There was no history of previous illness.

Autopsy: No tumor was found before the abdomen was opened. Belly filled with serous fluid, double intussusception, first ilium into ilium about four inches, then this mass invaginated into iliocaecal valve into colon about six inches. The part into iliocaecal opening was removed easily, but the mass where the ilium was invaginated into the

ilium was gangrenous and so adherent it could not be removed without tearing the gut.

Case Five: Man about 45 years of age, common laborer. Previous health good with exception of some digestive disturbance. Was taken severely ill one day just after eating his dinner with severe pain in region of stomach. Vomited a little blood with other contents of stomach. Was taken to his home a very sick man. Abdomen soon became tympanic over entire abdomen, but no tender point could be made out. On second day liver dullness had entirely disappeared. Death occurred on the sixth day with not much change other than a gradual rise of temperature and increased pulse rate.

Diagnosis: Perforation of hollow viscus, but unable to locate same.

Autopsy: Small amount of pus and extensive intestinal adhesions, perforation in duodenum about eight inches from stomach evidently result of an old ulcer, as a clean cut ulcer could be seen around perforation.

Case Six: Man 55 years of age, laborer, heavy drinker. Had some indigestion for a year or more. Was taken soon after eating his dinner one day, with severe pain in stomach and soon after vomited. The vomited matter consisted of only the food which he had eaten. He also had severe pain in region of right kidney radiating down region of right ureter making a diagnosis of kidney stone quite probable. He continued to vomit occasionally during the day and night immediately following onset of illness and abdomen became tympanic and temperature became elevated and pulse increased its speed. The man died in 48 hours from commencement of illness.

Autopsy: Free pus in abdomen, some intestinal adhesions, perforation of duodenum two inches below Pylorus in an old ulcer. Both kidneys and ureters normal.

Case Seven: Young man 30 years old. Kicked in abdomen by a horse with one foot, not hard enough to knock him down. Walked to house unassisted 100 yards distant. Saw him one hour later. He was lying down and had severe pain in abdomen. It required one-half grain morphine hypodermatically to relieve pain. He then got up to the table and

drank some tea. Did not seem sick. Pulse and temperature normal. Saw him next day. Had vomited some, thought it due to morphine, otherwise in good condition seemingly. Continued about the same for about four days, when temperature began to be slightly elevated and pulse rate increased, also continued to vomit occasionally. Bowels had moved with physic up to fourth day. Patient gradually grew worse, could not get bowels to move after fourth day and died on sixth day. Diagnosis, obstruction of bowels.

Autopsy: Abdomen full of pus. Large mass of adherent intestines in region of caecum. Ilium ruptured in two places a few inches from the caecum. Each rupture was about three quarters inches in length and three inches apart.

Case Eight: Man 50 years of age. Previous health good. Taken with severe pain in region of gall bladder. Vomited frequently. Temperature slightly above normal. Pulse accelerated. Tenderness over stomach and liver. Never had trouble previously. Diagnosis, gall stones. Pneumonia developed in right lung on third day. Death occurred on sixth day. Abdomen tympanic and tender on pressure during illness.

Autopsy: Abdomen full of seropus. Many intestinal adhesions. Perforation of transverse colon near hepatic flexure. Perforation seemed to be in an old ulcer.

Case Nine: Man 55 years of age. Had several previous attacks of pain in abdomen lasting only a day or two at a time, when he apparently would be as well as ever. Was taken one morning with severe pain in abdomen, pain general. No tender point, somewhat tympanic. Temperature and pulse normal first 24 hours. Did not seem very sick, only pain which was relieved by hypodermic morphine. Bowels did not move. Death occurred on fifth day. Last two days temperature and pulse above normal and abdomen greatly distended.

Autopsy: Abdomen full of pus. Three feet of ilium nearest caecum gangrenous. Appendix perforated in two places, seemingly in two old ulcers.

Case Ten: Young man about thirty. Had three attacks of what was diagnosed as ap-

pendicitis during two years just previous to fatal illness. Last attack previous to fatal illness three months before. Was taken with all typical symptoms apparently of appendicitis, i. e., pain in abdomen, tympanitic, nausea, vomiting and tenderness in McBurney's point, temperature and pulse not much above normal for 48 hours, after this time pulse and temperature gradually became worse and man died on fourth day. Diagnosis, appendicitis.

Autopsy: Some intestinal adhesions in region of appendix, but no signs of acute inflammation of appendix. A knuckle of ilium near caecum was bound together by a fibrous band in such a way as to cause complete obstruction of bowels, which of course was the cause of death.

A CASE OF COMBINED CORD DEGENERATION WITH PERNICIOUS ANEMIA.*

BY JULIUS GRINKER, M. D., CHICAGO.
Instructor in Clinical Neurology, Northwestern
University Medical School, Chicago.

With the kind permission of Dr. Patrick, I am able to show you this interesting case, which came to our clinic three and a half weeks ago. The patient has been complaining for the last four and a half months of a peculiar numbness and heaviness in his lower extremities extending up to the knees. He also complains of the same feeling in the lumbo-sacral region and in his upper extremities, particularly the fingers and hands. He is extremely tired after walking, or after any kind of exertion. This feeling of fatigue, however, he claims to have suffered from some months previous to the onset of his present trouble. He is unable to work, and therefore seeks our advice.

Upon questioning him, he also states that his sexual function has entirely abated. He suffers from constipation, which is rather extreme. He also had bladder disturbances some time previously. He experienced a sensation of chilliness in his lower extremities, is worse in cold weather. There were no gastric or other crises at any time. Objectively,

I find no sensory disturbances, pain, temperature, and tactile sense not impaired. The stereognostic sense has suffered somewhat: He cannot distinguish correctly the different coins and other objects placed in his hands. I had him walk, and the first thing we noticed was an ataxic gait. We will have him walk now across the floor. As the patient walks, if you will notice carefully, you will see it is not exactly the walk of tabes. Of course, there is ataxia, but there is something else associated with it. He sways rather sideways and his gait has some resemblance to the reeling of cerebellar ataxia. Further it appears as though the toes were sticking to the floor at times. The tabetic walk is different. The tabetic raises his feet high, and comes down suddenly, with the heel usually first. This man does not do that. Nevertheless, he has extreme ataxia, Romberg is very distinct.

Upon examining his eyes, I find there is no Argyll-Robertson pupil, no ocular palsies. The eye fundi are normal, there are no retinal hemorrhages. When I come to take his knee reflexes, I find them both exaggerated. There is distinct ankle clonus, and while it does not last long, it is there, and more on the left than on the right side. Tabes may now be ruled out of consideration, and the last group of symptoms favors the diagnosis of spastic paraplegia. He has ataxia and symptoms pointing to involvement of the motor tracts.

How do we reconcile these findings? Lichtheim was the first to call attention to the fact that such a picture may be produced by certain anemias, and particularly by pernicious anemia. Gowers and Strümpell described this symptom complex as ataxic paraplegia, and called it a combined system disease in which both the posterior columns and the direct and crossed pyramidal tracts are involved; it being considered a chronic disease and of a duration of from three to five years. Our case is not of the chronic type described by Gowers and Strümpell. As has been demonstrated by Lichtheim, Minnich, Nonne and others, there is a degeneration of the cord, which is sub-acute and

*Read before the Chicago Medical Society, February 3, 1904.

found in connection with anaemia and other states of ill-health.

This man's trouble began about four and a half months ago with distinct paresthesia, never having had lightning pains, nor the other characteristic symptoms of tabes, except the ataxia. Besides this he presented symptoms of spastic paraplegia. What is it? Looking at the man's face we are immediately struck by his cachectic appearance: his skin is yellowish white. When I first saw him I thought of the cases described by Putnam, Dana, and by Dr. Billings of our city. I thought it was one of those cases of anemia. Specimens of blood were sent to the Northwestern laboratory, and I received the following report. Blood count: 1,200,000 erythrocytes; megalocytes, microcytes, poikilocytes and normoblasts; 45 per cent hemoglobin, and 6,000 leucocytes. This is a characteristic blood finding for pernicious anemia. In addition to pernicious anemia we have the picture of so called ataxic paraplegia. But ataxic paraplegia does not mean anything beyond naming the most pronounced symptoms, ataxia and paraplegia. A very interesting monograph was written not very long ago by Russell, Batten and Collier, in which cases of diffuse cord degeneration were described which are identical whether caused by pernicious anaemia or other states of chronic disease. They distinguish three stages. Not all cases of combined system degenerations pass through these stages. The first stage described is simply one of paresthesia, with slight ataxia, and in which there is no paraplegia. The reflexes are slightly exaggerated. In the second stage described by these authors there is the paresthesia persisting, spastic paraplegia, with great exaggeration of the reflexes and ankle clonus. The third stage described is where the disease has extended downward to such an extent that we have the abolition of the knee jerks, and a picture of complete flaccid paraplegia, absolute anesthesia, absolute incompetence of sphincters, oedema, bed sores, emaciation, etc.

The reason why we get exaggerated reflexes in the first and second stages is because the dorsal cord is affected in the first two vari-

eties. However, later on, the disease extends down the lumbar cord; then we have all the symptoms of the third stage.

This disease is caused either by pernicious anemia, or else, as most authors assume, by a toxin that is supposed to be the common cause of both the pernicious anemia and the cord changes. Most cases of pernicious anemia present no symptoms of cord disease. Where the cord changes are very pronounced the symptoms of pernicious anemia may remain in the background and the nervous symptoms predominate. The patient came to the nervous department suffering from nervous symptoms chiefly, and it was only after an examination of the blood, suggested by the pallor of the face, that we discovered he had pernicious anemia. It is not infrequent that combined cord degeneration is diagnosed before the symptoms of pernicious anemia are fully developed. The president of the Society, on the other hand, knows of a patient who presented himself with some internal affection, and while under treatment developed paraplegia and a typical case of combined cord degeneration. But in our case we have a patient whose nervous symptoms led to the discovery of a pernicious anemia. The patient is 48 years old and his family history is negative, except that there is a tendency to dissipation in his family. His father died young, largely from dissipation. One of his brothers is dissipated. Patient has been a drinker all his life. He had syphilis twenty-two years ago, but says he had no symptoms worth mentioning, so slight were they. In 1892 he fell thirty-nine feet from a building, but did not hurt himself particularly, and shortly afterward was as well as ever. One year ago he was operated upon for hernia, and he dates his nervousness from that time. He had influenza at about the same time. From his description he seems to have suffered from neurasthenic symptoms, and these continued up to four and a half months ago, when the first signs of cord degeneration manifested themselves. It is no exception to the rule to see this disease begin in individuals who have become debilitated by bad habits or overwork, or whose systems have

been poisoned by some toxin, as malaria, syphilis, or alcohol.

Most of these cases of combined cord degeneration and pernicious anemia are bed-ridden and it is a special privilege to be able to present a case before a medical society.

As my time is nearly up, I shall be unable to enter into the pathology of this rather rare and interesting disease.

The prognosis is extremely grave. The disease lasts from six months to one and a half years. No recoveries have been recorded.

New Incorporations.

New incorporations have been licensed by the Secretary of State at Springfield as follows:

Buck Salt company, Cerro Gordo; capital, \$50,000; object, manufacturing medicated salts; incorporators, D. L. Bourland, E. J. Stevens, C. B. Stevens.

Fielding Staff of English and German Specialists, Chicago; capital, \$75,000; maintain a sanitarium; incorporators, Frederick J. Fielding, Henry J. Fleischauer, Chester C. Coates.

Krop Remedy company, Chicago; capital, \$50,000; manufacturing chemicals, drugs, and medicines; incorporators, P. Philip, D. E. Reed, W. C. Daniels.

Addison Medical company, Chicago; capital, \$2,500; object, manufacture, mercantile, and printing; incorporators, A. C. Strayer, W. S. Lewis, Vernon Breckinridge.

Marriages and Deaths.

Marriages.

Andrew C. Hausen to Miss Stella L. Griffin, both of Peoria, December 31, 1903.

Deaths.

Askw, J. R., Jacksonville, Feb. 13, aged 85.
Bain, Edw. C., Pleasant Plains, Feb. 14, aged 61.
Burns, Lewis R., Toluca, Dec. 30, aged 80.
Elliott, Wm., Peotone, Jan. 16, aged 48.
Goodall, W. W., Englewood, Feb. 10.
Grigson, Richard J., Augusta, Jan. 16, aged 73.
Humble, U. M., Iuka, Jan. 12, aged 73.
Jones, W. H., Henry, Feb. 9, aged 60.
Kinthan, Frederick, Nauvoo, Jan. 14, aged 70.
Maunier, Chas. E., Chicago, Feb. 8, aged 44.
McElvain, Perry, Alto Pass, Nov. 13, aged 50.
O'Connor, John D., Chicago, Jan. 30, aged 29.
Ross, David D., Peoria, Feb. 2, aged 63.
Thomas, Sydney Smith, St. Anne, Jan. 20, aged 60.
Wade, Wm. D., Plymouth, Feb. 8, aged 62.

Chicago Items.

Dr. A. B. Ancker, of St. Paul, Minn., has declined the appointment of Superintendent of the Presbyterian Hospital, Chicago.

The Presbyterian Hospital, Chicago, will build an addition of a surgical pavilion and out patient dispensary at a cost of one-half million dollars.

The Cook County Board has appropriated for 1904: To the County Hospital, \$331,320; to the Institutions at Dunning, \$382,083; Coroner's office, \$31,060.

President R. B. Preeble and Secretary F. X. Walls of the Chicago Medical Society are enjoying a vacation in Cuba. They will return about March 1st.

Gauze Left in Abdomen.

The Chicago papers of February 8, printed a special telegram from Springfield, Ohio, stating that a man operated six months previously in Chicago had been relieved of six yards of gauze left in his abdomen by an oversight.

Dr. William E. Quine.

The annual reception in his honor was given by the senior class of the College of Physicians and Surgeons recently at Illinois hall. The reception marked Dean Quine's fifty-seventh birthday, thirty-fourth year as an instructor in medical schools, and twenty-first year as a professor in the College of Physicians and Surgeons. The formal reception closed at 10 o'clock with the presentation of a loving cup and a short speech by Dr. Quine.

The St. Elizabeth's Hospital, reports that 2,240 patients were treated during the year. Of these 1,529 were regularly admitted, and 711 were brought by emergency ambulances. Records indicate that 915 of the former recovered, 237 improved, 70 remained unimproved, and 197 died, of which last 68 were brought in a dying state. Of those regularly admitted 411 were cared for without remuneration, 336 paid in part, and 782 paid in full. The hospital is at Claremont and Oakley avenues, one of the most elevated sites in the city.

Additional Attendants at Dunning.

The appropriation for 1904 provides for seventeen additional attendants in the hospital for the insane at Dunning, and Dr. Podstata, the superintendent, is preparing to fill the places.

"The salary of men attendants has been raised so that even an inexperienced man starts at \$30 a month," said Dr. Podstata. "A woman attendant starts at \$28 a month. This rate includes board, lodging, and laundry service. The salary increases according to merit.

"Additional pay is given members of the Dunning fire department. All the nurses have training school advantages in addition to the salary."

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

MARCH, 1904.

NEXT ANNUAL SESSION, BLOOMINGTON, MAY 17, 18, 19, 1904.

OFFICERS:

PRESIDENT—CARL E. BLACK, Jacksonville.
SECRETARY—EDMUND W. WEIS, Ottawa. TREASURER—EVERETT J. BROWN, Decatur
EDITOR—GEORGE N. KREIDER, Springfield.
ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

J. W. Pettit.....Chairman
Ottawa.

E. B. Montgomery....Secretary
Quincy.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

E. M. SuttonChairman
Peoria.

R. W. HolmesSecretary
387 N. State St., Chicago.

Committee on Public Policy and
Legislation.

P. M. WoodworthChicago

L. C. TaylorSpringfield

H. C. MitchellCarbondale

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

J. W. Pettit, Ottawa.

E. M. Sutton, Peoria.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

Term Expires 1904.

(2) W. O. Ensign, Rutland.

(6) L. J. Harvey, Griggsville.

(9) J. C. Sullivan, Cairo.

Term Expires 1905.

(8) H. C. Fairbrother, E. St.
Louis.

(5) W. K. Newcomb, Cham-
paign.

(3) J. F. Percy, Galesburg.

Term Expires 1906.

(7) C. Barlow, Robinson.

(1) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

The Pres. and Sec'y, Ex-Officio.

THE QUESTION OF ADVERTISEMENTS.

Our Journal has made such a creditable beginning and has attracted so much favorable comment from our editorial friends, that we are anxious that no mistake should be made in its conduct.

We realize that the profession is far from a unit on the question of advertisements, and we are often puzzled to know just where to draw the line between the objectionable and unobjectionable.

What class of advertisements should be accepted is a pertinent question. Do the advertising pages in any way represent the condition of the profession of the State, or are those pages openly and avowedly for purely commercial purposes without reference to professional ethics?

Is there anything in the principles of ethics, as enunciated by the American Medical Association, of which we are a component part,

which should guide us in the selection of advertising?

There is that part of Chapter 2, Article 1, Section 1, which says: "Everyone on entering the profession * * * incurs an obligation to uphold its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness, etc." And in Section 8, it says: "It is equally derogatory to professional character for physicians to hold patents on surgical instruments or medicines * * * to assist unqualified persons to evade legal restriction governing the practice of medicine, or to dispense or promote the use of secret medicines, for if such nostrums are of real efficacy, any concealment regarding them is inconsistent with beneficence and professional liberality, and if mystery alone give them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice, etc." Do these sections

apply simply to the professional conduct of physicians, or are the principles which underly them also applicable to our medical journals?

Plainly there are several ways of looking at this subject. Many good men believe that the cause of the profession, as well as medical journalism, would be immediately promoted if no advertisements were accepted.

Another very strong and worthy element of the profession believe that we should make our journals medical news papers for the sole purpose of distributing medical news, without in any way offering an opinion or trying to guide or mould the ethics, thought or opinion of the medical public.

Still another view is to regard our Journal as an important part of the machinery of our State organization for moulding and guiding the opinions of the profession of the State.

No matter which one of these views with their innumerable modifications, is held, very complex problems are presented. If no advertisements are accepted the fees from members would have to be greatly increased. A very important source of revenue would be cut off.

If the second view should be followed we would have nothing but a medical newspaper, surrounded by about as much moral principle as the average daily sheet which comes into our hands.

If we adopt the third plan, which is the prevalent one, the selection of advertisements simply becomes a matter of judgment on the part of the editor and his immediate advisors to be modified from time to time by the innumerable counter-influences which are brought to bear.

As soon as the Editor and Councilors enter upon the moulding of professional opinion, either by the editorials which they write, the reports which they accept, or the adver-

tisements which they contract for, they enter ground which subjects them to considerable criticism from members of the profession who do not look upon these problems in the same light as they do. With a State Journal this will change with the personnel of the council.

Necessarily most of these questions must be decided by the editor who will only report to the councilors quarterly or at even longer periods. The editor is supposed to devote at least a part of his time to the study of the profession at large, and to bring to his readers such suggestions for their uplifting and improvement as he can.

Whoever is delegated to pass upon advertisements will become subject to criticism. The same is true of his editorials. If they are carefully and studiously written they will almost of necessity meet with opposition.

While the first plan is simpler for the editor in that it does away with possibility of criticism between the officers of the organization, it would greatly limit or entirely discontinue many good society publications; while the second will alienate the confidence of many who formally believed that our medical journals should assist in uplifting the profession by the character of their advertisements, as well as by the character of their editorials.

By the third plan our publication would be lowered to the level of a distributor of news without opinion or comment. If we desire simply to distribute news at so much the page, the only duty of the editor would be to see that the copy is in proper form, the proof carefully read and that nothing, which on the face of it is objectionable, appears in the columns.

Can the same rule be applied to advertisements? If they appear unobjectionable on their face, can they be accepted without further investigation. Should our Journal ex-

press by any direct action an opinion on the ethical question of advertising, or should it content itself with an approval of the moral side and accept them for revenue only. In brief, do we as a Society and a profession endorse those things which are advertised in the columns of our Journal? There are plainly several ways of looking at this question.

Undoubtedly a great and lasting good will come to us as a profession if the Journal of the American Medical Association and all of our other Journals published by Medical Societies or directly representing medical societies, will join in formulating specific rules by which advertisements may be accepted.

If this plan could be adopted by these journals it will go a long way toward bringing other medical journals into line, and the general effect will be to eliminate the criticism which is now so frequently heard regarding the character of some advertisements which are accepted by some of our best journals.

The question should be looked at reasonably, sensibly and from the standpoint of the best interests of the profession, all things considered. Prudish or narrow views of the subject should not and cannot prevail if the various elements entering into the question are understood. C. E. Black.

Just as we go to press we are in receipt of a communication bearing on this subject. (Editor.)

One of the leading advertising managers writes us as follows:

I am very much interested in State Medical Journals as advertising mediums. Your publication is the strongest one in this new phase of medical journalism. I believe this class of publications will eventually drive out of the field a number of irresponsible personal organs which have been the bane of medical journalism of this country.

SHOULD WE ASK FOR SUCH A LAW?

* * * A number of states have been making efforts to secure legislation for the protection of confidential relations between physicians and patients, basing their claim upon the significant fact that the consultation between doctor and patient should be held sacred by the courts.

Those who are now actively engaged in trying to secure this legislation say that the doctor can now be forced to reveal that which has been given to him under the implied or expressed pledge of secrecy, and *this is revolting to his sense of honor*. Hence the protest and appeal which come from those of a new profession who would seek protection by legislative enactment. As it is now, the lawyer and the clergyman have the protection of the law for their professional secret against the questions of examining counsel and in a republican form of government one man is the equal of any other man before the law, but does equal and exact justice entitle the doctor to refuse what a court demands of information necessary to the performance of its functions?

The chances for criminals to escape conviction or secure pardon are unusually many, and if the minister and the lawyer and the doctor are all three excused from revealing anything that either knows in connection with the case that they or either of them might call a professional secret, and which the court can never know so as to decide whether it be a professional secret or not, the difficulty of convicting criminals and deciding the validity of wills, will be increased beyond doubt.

At the present time it is estimated that twice as many murders and suicides are committed by poison as are effected by other means.

Questions concerning whether a patient or person was or was not poisoned, whether the

family did or did not do certain things, whether the cause was this or that, or the other, may become exceedingly important. Questions concerning alleged offspring and criminal attempts to cover up disgrace are all involved, and whether those physicians who are endeavoring to secure the enactment of such a law, as I have referred to, are asking too much or not, the subject is worthy of consideration before we sanction it.

My own opinion is, while such a law would favor members of our profession, we should remember that the State and Nation have interests to conserve, and if we demanded such medico-legal legislation we must be prepared to accept a clause that will forbid doctors, under penalty, of their own volition, to reveal secrets they learn in the practice of their profession. * * *

Read before the Douglas County Medical Society, February 4, 1904, at Tuscola, Ill., by J. L. Reat.

IROQUOIS THEATRE MEMORIAL.

Immediately the great shock of the terrible disaster in the Chicago theatre had passed away a movement was set on foot to erect a memorial of that heart-rending event and various plans have been prepared for this purpose. None of them seems to have been worthy of serious consideration and the opportunity for a movement which shall at the same time commemorate the calamity and afford the public the desired opportunity to contribute to a worthy cause seems about to pass away. Under these circumstances it occurs to us to suggest that the people of Chicago be informed that the best use that could be made of money contributed for this purpose would be to assist in furnishing the Chicago Medical Society such a home as its large membership, its scientific activity and its value to the community justly entitle it. When the theatre disaster became known the

profession responded nobly to the demands made upon it and contributed freely of time and strength to relieve the distress of the sufferers. (See letter to Chicago Tribune, page 753). This is only one instance of the beneficent labors of the members of the Society for the welfare of the people of Chicago. No great movement for the improvement of the care of the afflicted or the prevention of disease and suffering is complete without the cooperation of some of the distinguished members of this Society. We need only mention the present high standing of the Cook County Hospital and the Hospital at Dunning and numerous other hospitals, altogether due to the gratuitous work of medical men, and the remarkable work of the health department in proof of this. Without going further into the discussion of the subject we suggest to the secular press of the city that they take up this matter and inform the people that the most appropriate memorial of the Iroquois disaster would be a home for the Medical Profession of Chicago.

A REQUEST.

The editors of the Illinois Medical Journal request that the 4,589 members of the Illinois Medical Society and other subscribers of this Journal, give preference to the following companies in all of their purchases.

These companies are all advertisers in this Journal and very materially assist the Illinois Medical Society in a financial way:

Drug Stores—

Decatur Drug Co., Decatur.
R. N. Dodds, Springfield.

Colleges and Schools—

College of Physicians and Surgeons.
Chicago Eye, Ear, Nose and Throat College.
Illinois Medical College.
N. W. University Medical School.
Chicago Policlinic and Hospital.
Rush Medical College.

Hospitals and Sanitariums—

Broughton's Sanitarium.
Cincinnati Sanitarium.

Jerseyville Sanitarium.
 Maplewood Sanitarium.
 Milwaukee Sanitarium.
 Presbyterian Hospital.
 Presbyterian Hospital Training School.
 Waukesha Springs Sanitarium.
 "The Sanitarium," Rockford.

Medical Books—

E. H. Colegrove & Co.

Medical Register—

R. L. Polk & Company.

Physicians Furniture—

W. D. Allison & Co.

Printing—

Illinois State Journal Co.

Remedies and Foods—

Armour & Co.

Abbott Alkaloidal Co.

Antikamnia Chemical Co.

M. J. Breitenbach & Co.

Denver Chemical Co.

Fairchild Bros. & Foster.

Mr. Fellows.

Gardner-Barada Co.

Kress & Owen Co.

Purdue, Frederick & Co.

Tilden Co.

New York Pharmacal Co.

X-Ray Tubes—

Friedlander & Co.

X-Ray Apparatus—

Victor Electric Co.

R. V. Wagner & Co.

Correspondence.

SECULAR PRESS LENDS ASSISTANCE.

To the Editor:

The press of the State have met us more than half way in their response to an invitation to aid in the crusade against tuberculosis. The commendable spirit shown by the press in this matter makes it possible for the essential facts presented in our proposed symposium to be brought to the notice of every reading person in the State. This insures that proper direction will be given to public sentiment which is the first important step in a campaign of this kind. After that the work will consist in crystalizing and concentrating public sentiment. This will not prove difficult when the public entertains rational views. Dr. Homer M. Thomas has been added to the list of essayists. His topic will be "The Economic Loss to the State from Tuberculosis." His deduction will be made from statistics now being computed by the State Board of Health. Yours fraternally,

J. W. Pettit.

Monmouth, January 19, 1904.

Illinois Medical Journal:

Dear Sirs. Apropos the article in Journal of December, "Another Victim," I wish to report an attempt to do the swindle act. The man introduced himself as "Curtis," representing the "North American Accident Insurance Co." and like "Mr. Easterly," in above mentioned article, he was advance agent, etc., etc., wished my application, etc., etc., and would collect fee, etc., etc. Well, his story was too good and I did not bite. I could not find that he had interviewed any other physicians of our city and I presumed when he found he could not work me, he made his escape. I report so that it may fall under the eyes of other M. D.'s as the above mentioned article, fell under mine and thus "forewarned is forearmed." The lesson is this: Never pay money to any man, whom you do not know to be what he represents. Make them produce the goods first.

Yours truly,

We have received the following communication from the Executive Committee of Bloomington regarding the preparations being made for the annual meeting.

Bloomington, Ill., Feb. 10, 1904.

Editor Illinois Medical Journal,
 Springfield, Ill.

Dear Doctor: The Executive Committee of the McLean County Medical Society, in connection with the other appointed Committees have been very busy in perfecting plans and making such arrangements and preparations as are possible at this date for the annual meeting of the State Medical Society which meets in Bloomington May 17, 18, 19, this year.

A good place of meeting for the Sections of the Society has been secured in the Odd Fellows Building and rooms with ample space and convenient location has been secured for the exhibits.

Reports from the various Committees in their departments of work are very encouraging and the outlook is very promising that this will be one of the most interesting meetings of the State Society in its history.

The Committee on Transportation is doing everything possible to secure the very best railroad rates.

The Committee on Exhibits is meeting with success in the sale of exhibitor's space and we are already assured of a fine display which will be of interest to every physician who attends the meeting.

The Committee on Scientific Exhibits is very

much encouraged from the correspondence relating to the department, and this exhibit can not fail to interest the members of the Society.

The Committee on Entertainment have plans whereby they have assured us that a general good time will be in waiting for all those who attend the meeting.

Other Committees are reporting equally favorable progress and encouragement, the details of which need not be mentioned.

A letter of invitation will be mailed to the Physicians of the State calling attention to next Annual Meeting of the State Society and giving information in regard to railroad rates, hotel accommodations, etc.

Yours very truly,

E. Mammen,
Chairman Ex. Com.
J. Whitfield Smith,
Secretary Ex. Com.

CORRECTION OF DR. RAFFERTY'S REMARKS.

Robinson, Ill., Feb. 4, 1904.

Editor Illinois Medical Journal,
Springfield, Ill.

Dear Doctor: I want to correct the stenographic report of the discussions before the Aesculapian Society at its last meeting, appearing in the February number of the Journal.

In the discussion of the papers of Drs. Jones and Kerrick on typhoid fever, I am made to say "I had a lady seventy-two years old with a typical case of typhoid fever. After three weeks her temperature got down to 100° and after that her fever got higher.

* * * I hesitated for a few days and finally made up my mind that she had typhoid fever, etc.

The idea that I really intended to convey was that this old lady, after running the usual course in her attack of typhoid fever developed a post-typhoid sepsis—which is not uncommon—and that she continued to lose as long as she was kept in bed, and on a liquid diet. Further, that after hesitating a few days, the patient was gotten out of bed and put on a semi-solid diet, and that from this time on her convalescence was rapid.

In this same discussion, Dr. Hayhurst is made to say that in his cases the diarrhoea and fever were lessened by the mild chloride and quinine—when what he really said was that he gave these two remedies during the first forty-eight hours only, as a therapeutic test in the early diagnosis, and that he attributed the lessened diarrhoea and lowered

temperature to acetozone, which he had used in ten or twelve cases.

Trusting you will kindly correct these errors in the March number of the Journal, I am,

Very truly yours,

H. N. Rafferty.

LEGISLATIVE COMMITTEE REPORT.

The following report of the Legislative Committee has been unavoidably delayed in its publication for several reasons. In the first place the Legislature had not adjourned at the time of the annual meeting held in Chicago, and the Legislative Committee was unable to report and authorized to delay its report until after the adjournment of the Legislature.

Certain events lead the Judicial Council to subsequently request the Legislative Committee to delay the publication of the report. This the Committee acceded too.

At the last meeting of the Council, by a vote of that body some modifications were made and there being no further objections, the Committee was permitted to send in the report for publication. The report is as follows:

Mr. President and Members of the Illinois State Medical Society:

According to the custom of this Society and in conformity with the requirements of the constitution and by-laws, the Legislative Committee would respectfully make the following report:

A large number of bills were introduced which were more or less of interest to the profession. The law enacted in 1901, creating and establishing boards of health in counties not under township organization, was modified in several sections although the general provisions remain the same.

The law of 1901, known as the vital statistics law and requiring reports of births and deaths, and the recording of the same, was considerably modified to meet objections urged in the outlying districts. While the modified law is inferior to the original the Board of Health hope to be able to secure reliable statistics notwithstanding these

changes. This law should be strengthened at some future time.

The texts of these laws have been published in full in the *Journal of our Society*, and need not be reported at this time.

The pharmacy act of 1901, was amended in order to regulate the sale of cocaine, which is a wise provision.

Your committee devoted attention to quite a number of bills. Several bills, providing for the regulation of the practice of nursing, were introduced and one fathered by the State Board of Health and designed to place the regulation of the practice of nursing in their hands passed the Legislature, but was wisely vetoed by Governor Yates. Your Committee warmly advocated suitable regulations for trained nurses embodying provisions for their better education and training, but none of those introduced were satisfactory. This is one of the important problems for the next legislature.

A bill providing for an osteopath on the Board of Health also managed to pass the Legislature notwithstanding the protest of the profession. However, Governor Yates very wisely vetoed the bill, which was clearly class legislation.

At the meeting of the Illinois State Medical Society at Springfield in 1900, after considerable discussion of the medical practice act which had been passed at the previous session of the Legislature, the Legislative Committee, of which Dr. J. W. Pettit, of Ottawa, was the chairman, and Dr. J. A. Egan, Secretary of the State Board of Health, and Dr. H. N. Moyer were members, gave the opinion that the time had come for the Illinois State Medical Society to ask the Legislature to establish a Board of Medical Examiners separate from the State Board of Health. Many good reasons were given by Dr. Pettit and Dr. Egan why this should be done. At Peoria in 1901, after another very full and free discussion of this question, the Legislative Committee was instructed to frame such a bill to be presented at the next annual meeting of the Society.

In conformity with these instructions the committee entered into correspondence with every member of the State Society and so-

licited suggestions regarding this proposed law. Every Secretary of a State Board of Medical Examiners in the United States was written to for suggestions and every existing law was carefully studied. Finally the committee presented to the profession a memorandum for the proposed law. At the Quincy meeting this memorandum was thoroughly discussed, and after numerous corrections and modifications was adopted by the Society. At the same time the Committee was given full latitude to use its discretion in presenting the proposed bill to the Legislature, and was instructed to make such changes and modifications as in its judgment might appear necessary or desirable according to conditions surrounding the bill.

The committee sent copies of the proposed bill to every local society in the State requesting free discussion or criticism, and asking for further suggestions. As a result, many suggestions were received and those which were important and at the same time, practicable, were incorporated in the bill. Frequent conferences were held with interested members of the Society in order to more completely familiarize them with the proposed bill, and also to obtain further suggestions. In fact, it was the policy of the committee at all times to take the profession fully into its confidence, and you were so fully advised of the various steps that it is now unnecessary to go into details.

After the bill, from a medical point of view, was in condition to be presented to the Legislature, the Committee had it thoroughly reviewed by Mr. Shaw, one of the Attorneys of the Board of Health, and by Judge S. P. Shope, of Chicago, Ex-Chief Justice of the Supreme Court of Illinois, and Judge Edward P. Kirby, of Jacksonville. After some modifications, the attorneys assured us that the bill contained no unconstitutional features.

It was then introduced simultaneously in both houses of the Legislature. It was introduced in the Senate by Senator (Dr.) James H. Watson, a member of our Society, and in the House by the Honorable (Dr.) James A. Wheeler, also a member of our Society. One of these gentlemen was a Republican and the

other a Democrat, which at once divested the bill of any political significance. In the House the bill was referred to the Judiciary Committee, and in the Senate to the Committee on License and Miscellany. After the bill was introduced it was necessary to make several amendments to correct clerical errors and minor defects. A large majority of the Legislature, and the Governor had already agreed to support our bill and, but for unexpected opposition in our own ranks we have every reason to believe it would have speedily passed in the form desired. In our efforts to secure legislation we should settle our differences among ourselves and not before the members of the Legislature and then put aside individual opinions, for the session at least and be loyal to ourselves and to the Society.

Although we had the Governor and the majority of the Legislature with us the bill was apparently defeated by some of those in our own ranks who had not yet learned that their individual opinion or prejudice should be put aside for the sake of harmony of action.

The work of the committee has been fully before you during the past two years, and the bill, after being twice sent in full to each member of every local society, was unanimously endorsed by over fifty medical societies in Illinois, including the Illinois State Medical Society and the Chicago Medical Society.

In order, first to secure a separate Board, and

Second, to preserve the nomination feature of the law, the Committee found it necessary to yield to some disagreeable compromises, which removed practically all of the opposition excepting that of a personal and political nature.

Opposition to our bill came from several directions. First, many members of the Legislature were opposed to the creation of new boards. This was largely a political matter and was sufficiently overcome by the influence of physicians throughout the State with their home members, to secure the passage of the bill by a unanimous vote of the

Senate and to have insured its passage in the House by a large majority, had it been reported out of the Judiciary Committee as was repeatedly promised by its chairman.

Second, some of the best members of the profession did not think the bill sufficiently radical in its demands.

Third, some members of the profession led by some of those occupying official positions opposed the nomination feature of the bill, holding that the Governor should be entirely free to appoint whom he pleased, regardless of the formally expressed wishes of the State Society. The Governor was fully satisfied with the bill as passed by the Senate and statements that he would have vetoed the bill had it passed the Legislature are branded by him as utterly false.

Fourth, some of the newspapers voiced the sentiment of their medical advertisers, all of whom repudiate professional ethics and many of whom violate law as well as morals.

Fifth, other sources of opposition could be mentioned and some members of the profession still resent the calls of the committee for the continued aid that was asked.

While the Committee was far from satisfied with the bill as introduced, it feels that by this campaign it has made an advance in the right direction, and in the future it will be much easier to secure needed legislation, even more radical than was asked at this time. The physicians of the State have been fully aroused and will not cease their demand for a law framed for and by the profession that will give Illinois a Board of Examiners which will carry out the will of the profession as expressed in the formal debates and resolutions of our National, State and local Societies. After an exhaustive study of the medical legislation of every State of the Union and after a most voluminous correspondence with our members, involving the sending out of over 50,000 letters, your Committee has done its best to carry out the expressed will of the profession of this State; how well it has succeeded in doing this you must be the judges.

In conclusion the Committee wishes to thank each member of every local society for all he has done in its support and it wishes

especially to thank each and every one who contributed money to the support of this work, without which it would have been impossible for the committees to have carried on the necessary correspondence. It wishes also to heartily thank the officers of local societies throughout the State and the chairman of the Sub-Committees in Chicago for their active aid, without which, little or nothing could have been accomplished.

Very respectfully,
 Carl E. Black, Chairman,
 E. Fletcher Ingals,
 L. C. Taylor.

State Items.

Dr. Edgar Gelder of Virden has located in Peoria.

Dr. Benj. Lowman of Lincoln has located in Springfield.

Dr. O. P. Hopping of Havana has removed to Chanute, Kansas.

Dr. E. A. Jenkins of St. James, Minn., has located in Shelbyville, where he has purchased a practice.

Dr. Ketcham of Valparaiso, Ind., has entered into a partnership with Dr. W. P. Armstrong, of Springfield.

Concordia College, Springfield, which was closed because of an epidemic of scarlet fever, has been reopened.

Dr. S. D. Nixon, of Kearney, Neb., has been appointed to a position in the Englewood Union hospital of Chicago.

Dr. G. A. Pogue of Ontario, Oregon, was recently called to Sullivan, Moultrie County by the death of his father.

Dr. J. Tidball of Grafton, has been indorsed by the Jersey County Central Committee for representative in the Legislature.

The Julia F. Burnham Hospital, Champaign, has received gifts of \$20,000 from Mr. W. B. McKinley and Mrs. N. M. Harris.

Dr. C. W. Corrill, formerly of Jacksonville is said to be traveling over the State with a vaudeville troupe selling medicines.

Springfield Hospital of Springfield, has recently occupied a new wing. During the month of January 50 patients were received, 41 discharged and 32 remained at the end of the month; 25 operations were performed.

W. M. Postner, traveling with a medicine company, was found guilty of practicing medicine illegally at Piper City, and fined \$100.

Dr. Nicholas Senn has returned from a vacation of some weeks spent in Tahiti, Fiji Islands. His tender of services in the Russo-Japanese war has been declined.

Dr. David H. Nussbaum of Bloomington, has associated himself with his brother at Storm Lake, Iowa, and purchased a building which intend to remodel for a sanitarium.

Drs. W. J. Chenoweth and Ira N. Barnes were the guests of honor at the annual banquet of the Decatur Medical Society, January 26. Dr. S. E. McClelland acted as toast master.

Dr. Casey Culbertson of Piper City, who recently returned from Europe, where he has been studying, has accepted a position in Rush Medical college. He will teach obstetrics and gynecology.

The State Board of Health has prepared rules and regulations concerning the prevention and suppression of typhoid fever which are being distributed to the public by the secular press and local health officers.

Dr. W. C. Manley, of Franklin and Jacksonville who was arrested by the coroner of Morgan County on the charge of having caused the death of Miss Stella Mergatroyd by a criminal operation has been released on \$10,000 bond.

Dr. and Mrs. J. B. Murphy have gone to California for a vacation of several months. Dr. Murphy recently delivered a lecture on the significance of timely action in acute surgical diseases at the school of Domestic Arts and Sciences.

St. John's Hospital, Springfield, has issued the annual report for 1903. It shows that 1,338 patients were treated during the year, an increase of 321 over previous year; 520 were in the medical and 689 in the surgical service. The new addition was first occupied in July and the hospital has now accommodations for 150 patients and 80 sisters engaged in nursing and attending the training school preparatory to that vocation.

Dr. Charles A. Nichols, whose alleged persecution of Mrs. Susan C. Day of Urbana has resulted in his indictment by the federal grand jury, gave bond in the U. S. Circuit Court at Springfield in the sum of \$1,000 on each of two charges. Nichols is accused of sending objectionable letters and of operating a scheme to defraud through the United States mails.

Mrs. Day is the divorced wife of William A. Day, assistant attorney general of the United States. Nichols boarded at the home of Mrs. Day's father when he was living and now he claims that he is the common law husband of the woman. He has caused Mrs. Day a great deal of annoyance and, it is said, wrote her a

letter in which he demanded money in settlement of his claims against her property.

St. Mary's Hospital, Quincy.

The following officers of the hospital staff have been elected: President, Dr. John A. Koch; Vice President, Dr. John K. Reticker; Secretary-Treasurer, Dr. F. T. Brenner.

Midwife Mrs. Deckert Held for Murder.

Urbana, Ill., Jan. 31.—Mrs. Modestine Deckert, the midwife, who by an operation is held responsible for the death of Mrs. William Wenzholz, was brought to this city yesterday from Streator by Sheriff Clark and given a preliminary trial before the police magistrate of Champaign. She was re-arrested on a charge of murder preferred by the husband of the dead woman and pleaded not guilty. She was held to the grand jury without bail and is now in the county jail.

Ambulance Chasers said to Exist in the Medical Profession in Chicago.

That the city treasury is despoiled by organized bands of lawyers and physicians, sometimes known as "ambulance chasers," is intimated by City Attorney John F. Smulski in his annual report, which has just been made public.

The names of certain young lawyers and doctors occur frequently in the list of damage suits as given in the report. Means of checking the alleged raids, which are costing the taxpayers of the city millions of dollars, are suggested.

The damages asked in the personal injury suits now pending against the city have reached the sum of \$38,666,952. The judgments outstanding amount to \$4,979,700, and are drawing interest at 5 per cent. The number of suits pending has grown from 46 in 1893 to 2,876 in 1904.

As to agencies for pushing improper damage suits against the city, Mr. Smulski said the facts "at least show close organization." He declares that not only lawyers but corporations make this their sole business, with a corps of solicitors, relations with certain physicians all over the city, and representatives who are "on the spot" almost at once after an accident.

Policlinic Hospital Receives a Benefit.

A dramatic ball was given at Lincoln hall January 25th. for the benefit of the Policlinic hospital. The first part of the evening was devoted to a comedy by Mrs. John Kenneth Mackenzie and the latter part to dancing. After the performance those who had formed the audience danced. The Policlinic hospital is one of the foremost charitable institutions on the north side. Several clinics are held each day, and the hospital is supported by the physicians in charge. The proceeds of the entertainment of the evening were devoted to endowing a free bed.

Alleges Forceps Were Left in Wound.

Because of an alleged operation on Mrs. Caroline Weundorf of Breedsville, Mich., six years ago, Dr. E. Stillman Bailey has been sued

for \$50,000. Mrs. Weundorf alleges that the surgeon left sewed up in the wound a pair of forceps five inches long.

Last September it is said that the instrument worked its way through her body, and a slight operation relieved her of the forceps.

The physician denies any knowledge of the operation. He says that he never heard of Mrs. Weundorf and would not know her if he should meet her.

A Joke From England.

At a recent Chamber of Commerce dinner the following story was told: "At the time of King Edward's recovery from appendicitis, thanksgiving services were held all over the British dominions. The services were concluded at a certain place by the singing of a well-known hymn, which happened to be in the back of the book.

"Let us close the services," the rector said, 'by singing the hymn, 'Peace, perfect Peace'—in the appendix.'"

Convict Clairvoyants.

Decatur, Ill., Feb. 13.—In the circuit court last night a jury returned a verdict of guilty against Dr. O. Dizara and Prof. Storey, clairvoyants, charged with embezzlement. They were arrested in Iowa where they unsuccessfully resisted extradition proceedings and were brought here for trial.

The testimony was to the effect that the clairvoyants not only fleeced their victims, but if they were women made love to them. Mrs. Oreana Staples was the complaining witness in the case and she lost \$200, which was given to the defendants under promise that they would invest it for her.

The penalty they will suffer is a term in the penitentiary.

Dr. Riffey of Atwater Fails to Report After Enlisting.

Carlinville, Ill., Jan. 27.—A sensation was sprung in the village of Atwater, ten miles northeast of here, yesterday when a United States marshal arrested Dr. J. H. Riffey, a young physician of that place, and left with him for Brooklyn, N. Y., where he will be court martialed for not reporting for duty in the regular army.

Some time ago Doctor Riffey made application for enlistment as a physician and surgeon in the United States army. When he was notified to report for duty it is said, he had changed his mind and paid no attention to the call. Having already been sworn into the service, his disregard of the notice is held to constitute desertion.

Charged with Fraud by Insurance Company.

Springfield, Ill., Feb. 24.—S. C. Sprague of Bloomington was bound over in the federal court today under heavy bonds to await action on the charge of using the mails to defraud a preferred accident company of New York. He is accused of insuring fictitious persons and then collecting the benefits, and is said to have collected about \$500. It is claimed Sprague in making reports, would give the name of a phy-

sician supposed to have attended the insured. Timing the mails carefully, Sprague would happen into this physician's office about the time the company's blanks for him to fill out would arrive and explain that a mistake had been made in physicians. He would then get possession of blank certificates, fill them out properly, and draw the money, it is alleged.

Praise for the Doctors.

Chicago, January 26.—(Editor of The Tribune.)—Was there one word of thanks in the accounts of the Iroquois fire for the doctors who were there on the moment? For them—because they left behind personal interests—left behind their own patients and those patients' fees? Because they worked all night—and next day, some of them—because they worked amidst such horror with unflinching courage and faith in God?

What cared they for time, personal interests, and large fees so long as they served humanity? Though in a quieter moment those fees might mean much. Will The Tribune let this chance to give praise where it is due go by?

Miss Millie Michael.

We are more than willing to make whatever amends we can to the doctors whose services have received such scant recognition.

Judge Tuthill Pleads for St. Charles Rural Home.

A plea for the St. Charles Rural Home for Boys was made by Judge Tuthill, speaking in the pulpit of the First Baptist church.

"I want to ask the members of this church," he said, "to recommend to any members of the legislature whom they may know to vote for the appropriations that we will ask for at the next session for the St. Charles Rural Home for Boys.

"Though the figure of a half million dollars may astonish you and be declared large, you should remember that the work is for the purpose of settling boys, future citizens, on the right track, and should we ask \$750,000 to complete that reservation fund you should, as parents, interest yourselves and intervene with your representative or senator to give us that sum."

John Worthy School Crowded.

"Since the Juvenile court was established we have removed the cells from the John Worthy school. This institution is now overcrowded, and many of the delinquents have been discharged before getting the full benefit of kindness, the greatest cure for bad boys in the world. The John Worthy school is the only place we have now to send delinquents. In time we will have the St. Charles Rural Home. Forty boys will be accommodated in each of the cottages on that 1,000 acres of ground. Let us start right and have thirty cottages there."

Reviews Work of Court.

Judge Tuthill reviewed in part his work as the judge of the Juvenile court.

"Take the little boy who is the son of foreign parents," said he, "and in many instances you will find his playground in the streets where the four corners are decorated with saloons.

His father works all day and at night he is too tired to feel a parent's interest in his family. The boy is not surrounded by the best of elements.

"He is not clothed, perhaps, as well as other children whom he may meet in the public school. If he is not given the proper care he is liable to begin playing truant from school. This is his start. The next we hear of him is as a delinquent. In a short time he feels that the law is his enemy and the agents of the law wish him only ill. He is locked in a police station and it is only a short time until he is a felon.

Tribute to Dr. Andrews' Memory.

As a tribute to the memory of Dr. Edmund Andrews, memorial services were held at the Second Presbyterian church February 24th. The meeting was arranged under the joint auspices of the Chicago Medical Society, Chicago Surgical Society, the Illinois and Michigan State Medical societies, American Medical association, Grand Army of the Republic, Academy of Sciences, and the Northwestern, Chicago, and Illinois universities, with the work of all of which Dr. Andrews had been identified.

The principal address was made by Dr. F. W. Gunsaulus, who eulogized Dr. Andrews' character as a man as well as his greatness as a physician.

Other speakers were Dr. Victor C. Vaughan of the University of Michigan, President James of Northwestern university, Prof. J. C. Grant of the Harvard school, Dr. J. H. Hollister of the Chicago Medical college, H. W. Dudley of the Grand Army of the Republic, and Dr. N. S. Davis of the Academy of Sciences.

It was said at the meeting that the work of preparing a permanent memorial will be undertaken by the various medical institutions of Chicago, although no steps have been taken as yet.

OPPOSES MUNICIPAL PLANTS.

Dr. J. A. Egan Does Not Favor Public Laboratories.

Since diphtheria anti-toxine has been doubled in price by manufacturers, it has been suggested that municipalities establish anti-toxine plants. Dr. J. A. Egan, Secretary of the State Board of Health, is against the plan. Asked for an interview on the rising in price of anti-toxine and the advocacy of the municipal anti-toxine plants, he said to a Springfield reporter:

"I have no information concerning the reported rise in the price of diphtheria anti-toxine, aside from the daily press reports. I have written to the manufacturers for full particulars. Until the receipt of these I will not be in a position to intelligently discuss matters.

"In regard to municipal manufacture of anti-toxines, as an abstract proposition I am not in favor of it for obvious reasons. I prefer that anti-toxines should be manufactured by commercial houses which are in keen competition and vie with each other in an endeavor to produce a superior product.

"These houses have an incentive to manufacture an anti-toxine of the highest grade.

The municipality as a rule has not. There is no question but that a city can manufacture as such a reliable and satisfactory diphtheria anti-toxine. But the disaster experienced in St. Louis and the neglect of certain cities to enforce ordinary measures to safeguard human lives should warn us to go slow in the establishing of municipal anti-toxine plants.

"Health authorities and physicians will not countenance any extortion of price of diphtheria anti-toxine. For several years past anti-toxine has been sold at comparatively a reasonable figure by different manufacturers, and seemingly there is no reason why prices should be doubled as reported."

Wealth of the Christian Scientists in Chicago.

David E. Fiske has sold to the Fifth Church of Christ, Scientist, 121x200 feet, in Madison avenue, seventy-five feet north of Forty-ninth

street, for \$21,780. The purchaser deeded the property in trust to the Chicago Title and Trust company to secure a loan of \$14,280, eighteen months, at 6 per cent, part purchase money.

The building to be erected will be of white marble and granite and will cost \$90,000. The First, Second, and Third churches have been erected in Chicago within the last seven years and each represents an expenditure of more than \$150,000. The Fourth church, which is being constructed at Sixty-seventh street and Harvard avenue, is nearing completion. It is said that the building for the Fifth church will be the most beautiful and expensive Christian Science church in the world. Many innovations are being projected, among which are opera chairs, cantilever balconies, and many exits. Including the congregation in West Pullman, there are now seven Christian Science congregations in Chicago.

County and District Societies.

Adams County Medical Society.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President W. W. Williams, Quincy
First Vice Pres. A. D. Bates, Camp Point
Second Vice Pres. Henry Hart, Quincy
Secretary John A. Koch, Quincy
Treasurer L. H. A. Nickerson, Quincy
Censors: Jos. Robbins, Quincy; C. D. Center, Quincy; R. J. Christie, Jr., Quincy.
Delegate to State Society, E. B. Montgomery, Quincy.

The regular monthly meeting took place at the Chambers of Commerce rooms, January 11th, W. W. Williams presiding.

The following members were present: L. B. Ashton, C. D. Center, R. J. Christie, Jr., M. C. K. Germann, J. M. Grimes, H. J. Nichols, L. H. A. Nickerson, Jos. Robbins, G. E. Rosenthal, Sarah Vasen, J. G. Williams, W. W. Williams and John A. Koch.

J. G. Williams read a paper entitled "Science of Medicine."

W. W. Williams read a paper on "The Surgical Treatment of Ulcers of the Stomach and Ulcer of Bowels following Typhoid Fever."

C. D. Center, showed a specimen of a "Non-traumatic Hematoma of the Testicle" of a patient age 50. The tumor was of about a year's growth, no specific or malignant history was obtained. Patient made a good and complete recovery.

The Surgical Treatment of Hemorrhage of Stomach and Ulcer, and Hemorrhage and Ulcer of the Bowel following Typhoid Fever, also Perforation.

On July 31, 1903, I was called by telephone to see Mrs. P., age 53 years, a native of Kentucky, who they said had taken suddenly ill with vomiting large quantities of blood—this being the third time in about 4 hours. I responded at once and found her pale and faint

lying on the bed and a large wash bowl close by containing at least one quart of pure red blood. I gave her ergotine and thyroid extract. A very unfavorable prognosis was given.

In about two hours I was called again, she having had another hemorrhage. I found her almost pulseless from the loss of blood. She said "I cannot stand it this way much longer, cannot anything more be done." I told her I was afraid nothing would help her, unless we were to cut down and open the stomach and ligate the bleeding vessels, and that in her condition she might die on the table. She wanted the chance. I ordered the ambulance and telephoned Dr. Rice to meet me at the hospital at once which he did. She had another hemorrhage after her arrival at the hospital. After a rapid disinfection of the abdomen and sterilizing our hands, Dr. Knaphide gave her ether. I made an incision about 4½ inches long in the median line above the umbilicus, then an incision in anterior wall of stomach 2½ inches long. The stomach was almost full of red blood, we emptied it through the incision and then I inverted the wall piece by piece and brought its lining membrane opposite the incision, and we found four different vessels bleeding on as many different points of the mucus membrane of the posterior wall of the stomach. I passed a small curved needle armed with fine silk, under each of the bleeding vessels and when they were tied the hemorrhage ceased. I then closed the wound in the stomach by a layer of fine silk going through all the coats of the stomach, after tying these I put in another layer of Lembert sutures of fine silk. Flushed out the abdomen with hot saline solution. The abdominal wound was closed with through and through stitches of silk worm gut sutures, all but a small opening for gauze drainage.

Infusion of normal salt solution and a saline enema was given on the operating table. Temperature 96 2/5° F.

Rectal enemas of hot beef tea carbonate of ammonia and brandy followed by nutritive

enemas every 4 to 6 hours were given; also hypodermics of ergotine and strychnine to support her, nothing by the mouth for 4 days except water to rinse out the mouth. The hemorrhage was controlled for 110 hours. Then she vomited blood and passed blood by the bowels, then the temperature soon began to rise and reached 105° F. at end of 5th day when she died. Her pulse was 160 just before the end.

Autopsy 24 hours after death. The abdominal incision healed all but where the gauze drain was inserted. Wound in stomach healed, no leakage at all. I cut the outer row of stitches, then made incision by side of former wound, found stomach filled with blood, found all four vessels I had ligated, there had not been any hemorrhage from them, but I found an open vessel nearer the pyloric region which had opened up since the operation. I should say I had treated the patient off and on for two years for syphilis. At the operation we found several spongy and congested places in the lining membrane outside of the bleeding vessels.

Dr. Andrew J. McCosh in the international text book of surgery, lays down the following as main symptoms which indicate operative interference.

- 1st. Profuse or repeated hemorrhage.
- 2d. Persistent pain.
- 3d. Persistent vomiting.
- 4th. Signs of perigastritis with adhesions of the stomach to neighboring structures.
- 5th. Signs of perforation, either threatened or complete.

Treatment:—

A. The ulcer being found when it is small and involving the mucus membrane alone, simple excision of the diseased mucus membrane and suture of its cut edges.

B. Resection of a part of the gastric wall when the ulcer is deep involving the muscular coats and when there are several within a limited area, but it is only in severe cases that it is to be recommended.

C. The performance of a gastro-enterostomy with or without local treatment of the ulcer. This procedure is appropriate in cases in which a considerable area of the mucus membrane is involved in a chronic catarrhal inflammation with numerous abraded patches or ulcers. In cases of large and deep ulcers also it will often be found more satisfactory than resection of a portion of the gastric wall. It has been found that after the lapse of a few months the unhealthy mucus membrane has recovered itself as is shown by the absence of pain and digestive disturbance, these symptoms have formerly been caused by the spasmodic contraction of the pylorus, and this had produced a stagnation of food in the stomach, a condition which can no longer exist after the anastomosis opening has been made. The mortality of such operations is about 12 per cent.

Perforation of gastric ulcer occurs in about 7 per cent of the cases, without operative interference. The result of direct perforation is almost invariably fatal. By means of operation about 25 per cent of the cases are saved.

The prompt performance of a laparotomy is the only salvation for the patient when the perforation has opened into the general cavity

of the peritoneum, and the sooner it is done the better. The edges of the perforation should be trimmed and inverted, the opening being closed by Lembert sutures of silk passed through the serous coat. The peritoneal cavity is cleansed as thoroughly as possible and the abdominal wound closed with the exception of a space left for drainage which is generally needed. If the patient's condition will permit a few minutes extra time, it is often well to excise the ulcer thoroughly and close the opening as if it were a gastrotomy wound, or as Berkely, G. A. Moynihan of London, England, who recommends a gastro-enterostomy of which he has done the operation six times, saving five cases.

Robson has been the most active operator in this field, his operations on the stomach already number over two hundred cases. In one hundred and seventy-seven operations for simple diseases of the stomach including perforation and hemorrhage, he records one hundred and sixty-five patients recoveries, 93.2 per cent.

Reference Hand book of the Medical Sciences, vol. 7, revised edition, 1903, says: If the bleeding be of a very serious character, recourse should be had to operation. Perforation into abdominal cavity. In this condition operation must be done early otherwise the case is almost certain to end fatally. Early operations are followed by more than fifty per cent of recoveries, in some institutions the proportion being even greater.

Now in regard to perforation of typhoid ulcer of intestine in the course of typhoid fever, it is about 6 per cent. The outcome is death in more than 90 per cent of the cases. The diagnosis is often difficult, the most significant symptoms are sudden and severe pain with tenderness in the right iliac fossa, accompanied by a fall of the temperature and signs of collapse. In three-fourths of the cases the symptoms appear suddenly; in the other fourth their onset is more latent or even may be entirely unnoticed. Keen's tables shows in one hundred and fifty-eight cases operated upon 15.4 per cent of recoveries, and of these in the last seventy-five cases the recoveries were twenty per cent.

Finney gives one hundred and twelve with twenty-three recoveries. In the Boston series of twenty-one cases only three recovered, while in Osler's wards six recovered in sixteen.

The dangers of operation are very great, mainly on account of the low vitality of the patient; but also because to the dangers of peritonitis and shock are added those of sepsis and exhaustion of the original disease.

In order to give any hope of success the operation should be done within twenty-four hours, the earlier the better. A median incision is best, if the perforation has taken place directly into the general peritoneal cavity, as a general septic peritonitis will already have commenced. If the site of perforation has been shut off by adhesions and an unruptured—intraperitoneal abscess formed, a lateral incision over the inflammatory mass is generally more convenient.

The perforation is not always easy to find. In the majority of cases it is situated in the ilium. It must be remembered there may be

more than one perforation. When found the edges should be turned in and the opening closed by interrupted Lambert sutures or mattress sutures which pass through the serous coat alone. In some cases the ulcers will be so extensive and numerous that suture is not practicable, and it may be necessary to excise the diseased portion of intestine and either form an artificial anus by fastening the end of the proximal portion to the skin, or unite the two ends by a Murphy button.

The peritoneal cavity should be carefully cleansed by sponging and irrigation with hot saline solution. Drainage is advisable. If the perforation has opened into an intraperitoneal pouch, this should be opened, cleansed and the perforation treated as above described.

Now a word in regard to hemorrhage due to typhoid ulcer. It is one of the most fatal complications of that fever. It is but rarely that surgical treatment is advisable. In exceptional cases it may be justifiable, but it will always be a very desperate and almost hopeless procedure, the source of the hemorrhage is very difficult to find, after the ilium has been opened by an incision. The bleeding ulcer, if found, should be cauterized or its edges drawn together by suture. It is advisable to make an artificial anus rather than to close the intestinal wound.

Feb. 7, 1903, I was called in consultation to see C., male, age 15 years. Typhoid fever of two weeks. Temperature 105° F. Pulse 108. Tympanic abdomen. February 8th, temperature 105° F. Pulse 126. February 9th, temperature 106.8°. Pulse 138. I opened the abdomen in the median line above the pubes, a large ulcer of the ilium the size of my little finger was found discharging fecal matter. The edges of the ulcer were inverted and closed with Lembert sutures. The abdomen was flushed with hot sterile saline solution. A portion of the abdominal wound closed, the remainder packed with gauze. Saline transfusion while on the table. He died in about one hour.

There were two more dark spots on the intestine showing the location of two more large ulcers. His temperature had not come down below 102° F. for 10 days ranged from 103° to 105°, until the last day when it rose to 106.8°.

Nothing was promised as to the result, and the operation was undertaken at the earnest solicitation of members of the family. This was the second case of perforation I had seen in consultation within two weeks. The first one died without operation. The reference hand book of the Medical Sciences, vol. 7, revised edition, 1903, says: It is unwarrantable, however, to expect a perforation to heal under medical treatment and as soon as the diagnosis is made surgery offers the real hope of recovery. It is of the utmost importance to make the diagnosis early but the subject presents great difficulty.

The regular meeting of the Adams County Medical Society as held in the Chamber of Commerce rooms, February 8, 1904, Dr. W. W. Williams presiding.

The following were present: Drs. Ashton, Burch, Center, Christie, Jr., Gilliland, Hart,

Rosenthal, Sigsbee, J. G. Williams, W. W. Williams and John A. Koch.

The Committee on Entertainments reported that arrangements had been made for a banquet on February 11th at the Depot Dining Room and that invitations had been sent to all members, the expense to be borne by the Society. The work of the committee was approved.

L. B. Ashton presented a paper on **A Sectional Anterior and Posterior Gypsum Splint** which had been applied to fracture of the lower third of the tibia.

L. H. A. Nickerson reported a case of dislocation of the shoulder in a female patient aged 84. The condition demanded an anaesthetic and although the patient had a heart lesion, no unfavorable action or untoward effect occurred.

Sectional Plaster of Paris Splint.

By Dr. L. B. Ashton.

Dr. L. B. Ashton, presented a Sectional Plaster of Paris Splint which had been applied to a fracture in the lower third of the tibia.

The features brought out demonstrated that while this dressing possessed all the rigidity and security of the plaster cast made in the ordinary circular manner, it also offered many advantages, yet was quite simple and easy to apply.

It consists of a cast or case in two sections formed by moulded anterior and posterior splints.

While it may be said that this can be accomplished by cutting down through the dressing of the circular type while fresh, or by the device of the buried wire saw, all these methods necessitate extra labor for the operator, and sometimes mental and physical disturbance to the patient.

Ordinarily a circular cast cannot be applied to a fractured limb until the swelling has so subsided as to admit of a reasonable expectation that the dressing will continue to snugly embrace the parts throughout the several weeks in which it must be worn.

While perhaps there may be little to gain in the very early application of plaster—except in the aged, where an ambulatory splint is always desirable—in those cases where the evidence of inflammation is not very marked, the sectional splint may be put on anytime within the first few days. By reason of the ease with which the whole length of the leg, ankle and foot can be inspected, no avoidable harm could result from this procedure, either from constriction of the soft tissues, or in faulty reduction of the bony fragments.

With the leg and foot resting comfortably in its posterior bed the shaft of the tibia may be examined from time to time and results anticipated, by simply lifting the anterior splint like a lid. Through this, if thought desirable, at first evaporating lotions may be applied and later passive motion begun.

This facility further admits of frequent sponging, friction and light massage; measures which, if not of some therapeutic value are at

least most refreshing and diverting to the patient.

Should all of these points be of no practical worth, to escape the usual trouble of removing a plaster cast at the end of treatment, would alone recommend this modification.

The method of application suggested is as follows: Take two pieces of flannelette each wide enough to surround the back and front of the limb so as to allow of their being brought together on either side and still leave a margin of say two inches.

The posterior piece is made long enough to extend from the upper end of the fibula over the heel and well up to the ball of the foot, allowing an inch or more of material on either end beyond where the plaster will reach. The lower end of this is divided into three by two cuts so placed that the central portion will be the width and length required to form a plantar foot piece; the outer thirds being removed as far back as the base of the foot piece. The sound limb may be used for the cutting and fitting. This lining for the posterior splint being placed on a pillow which will receive and support the leg, the broken limb, freed from its first dressing is lowered upon it. The foot piece is now turned up and its end held by a loop of thread passed around the toes, the sides being caught up are fitted around the heel by stitching their lower ends to the plantar portion.

The anterior piece will reach from the tubercle of the tibia above to a point on the dorsum of the foot opposite that where the foot piece of the posterior splint ends; adding a liberal margin above and below.

These two pieces are then lightly fastened together, by a running stitch along a line on either side of the leg and foot, so as to fit the limb.

The foot is held at a right angle to the leg by a bandage given a hitch around the great toe and fastened to the head of the bed.

All being in readiness for the plaster work, an assistant holds the lateral projecting margins out as a guide while the plaster bandages are being applied to the front half. This is done by moistening the flannelette with the wet hand and running the plaster bandage up and down over its length until a sufficient thickness has been built up; being careful to preserve an even line along the edges and ends. After giving it a smooth finish with soft plaster and clean water, the limb is left in the pillow until the plaster has hardened.

With the anterior splint as a support, the patient is turned on to his face, the limb resting upon a pillow with the foot breaking down over its end. In this position the posterior portion is fashioned much as already described, building right up to the edges of the anterior portion with only the thin flanges between. In running on these bandages the more central strips are carried over the heel to the end of the foot piece and back; while the lateral ones return around the heel from side to side.

When all is set, the stitches binding the two halves together are cut between the two thicknesses of cloth which form the flanges on

either side. The excess of material is trimmed away, leaving enough to break over and give a finish to the edges and ends.

The cast may now be opened at will. Two narrow strips of adhesive plaster passed around above and below serve to retain it securely closed; although a stockinette or muslin bandage should be added to further secure and protect it from wearing during the long period through which it will have to do duty.

The same principle might be extended and applied to the various lesions where prolonged fixation is indicated.

This appliance elicited favorable comment from the members in the discussion which followed.

Banquet of Adams County Society.

The banquet of the Society was given February 11th at the Burlington Station Dining Room. The affair was successful and reflected much credit on the Committee on Arrangements which consisted of R. J. Christie, Jr., Chairman, Henry Hart and F. E. Tull. The following members with ladies were present: L. B. Ashton, W. H. Baker, H. P. Beirne, F. T. Brenner, G. W. Burch, A. H. Byers, C. D. Center, R. J. Christie, Jr., M. C. K. Germann, H. M. Harrison, W. S. Knapheide, T. B. Knox, D. M. Knapp, E. B. Montgomery, F. E. Nichols, F. M. Pendleton, Jos. Robbins, J. E. Rosenthal, J. B. Shawgo, Wm. Sigsbee, E. H. Toole, F. E. Tull, J. G. Williams, W. W. Williams, I. T. Wilson and John A. Koch. The speakers of the evening were I. T. Wilson, Jos. Robbins, H. M. Harrison, H. P. Beirne, R. J. Christie, Jr., F. E. Tull, C. D. Center, F. E. Nichols and others.

Vermilion County Medical Society.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8:30 p. m. Membership 60.

Officers.

President Jos. Fairhall, Danville
Vice President F. N. Cloyd, Westville
Sec'y and Treas. E. E. Clark, Danville
Board of Censors: H. F. Becker, E. A. Johnston, W. A. Cochran.
Committee on Violations of the Medical Practice Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

The Vermilion County Medical Society met February 8th, in the city hall. B. F. Miller, of Danville read a very interesting paper on **Bartholinian Abscess**, in which the discussion was lead by E. A. Johnston.

E. E. Clark of Danville read a paper on **Nasal Reflexes**, reporting two cases with identical symptoms, caused by a septal spur, clearing up after operation.

Bartholinian Abscess.

By A. Merrill Miller, M. D., Danville.

In making a systematic and complete examination of the female genitalia one observes (and no examination is complete without inspection) a small opening one or two m. m. in diameter—1 c. m. to either side of the hymen. This is the opening of the duct of Bartholin's

glands. By palpating each labium between the index finger and thumb usually a small body the size of a lentil is found well imbedded in the soft parts. This is the gland of Bartholin, or the vulvo-vaginal gland. It is usually 2 or 3 c. m. from the free border of the labia majora and opens by a duct 2 c. m. in length lined with cuboidal epithelium. This body, analogous to Cowper's gland in the male, is but of passing interest when normal but assumes surgical importance when diseased.

The most frequent pathological conditions found are inflammatory. Simple retention cysts are seen. Occasionally malignant new growths of these the adenoma is most frequent. The exciting causes preceding changes in the glands may be considered as (a) Traumatic, (b) Inflammatory. Under traumatic may be mentioned:

- (1) Masturbation.
- (2) Violent coitus.
- (3) Scratching due to pruritis.
- (4) Irritation due to horseback or bicycle riding. The inflammatory:

- (1) Common pus producing organisms.
- (2) Gonococcus. This has been accredited with being the chief cause of abscess. While it is frequent it is not constant.

Infection may be direct as from the vagina or urethra in which it travels along the excretory duct, or an infection of a simple retention cyst may take place.

The symptoms produced are both local and general. Of the latter there is malaise, with or without fever depending upon the time and virulence of the infection. The local may be divided into subjective and objective.

The subjective symptoms are:

- (1) Local discomfort, more marked when in the erect position and especially when walking.
- (2) The pain may be referable to the rectum, but if the inguinal lymphatics are involved it is felt in the groin. It may be sharp and throbbing or so slight as to give little discomfort. There is usually pain when sitting because of pressure on the inflamed parts.

Objective:

A tumor, most frequent on the left side varying in size from a marble to a small orange, occupies the position of Bartholin's gland. The normal relations are disturbed, the tumor usually bulging to the opposite side. In the acute stage redness and induration exists. Later on palpation an exquisitely painful fluctuating tumor is made out.

Pressure on the gland will frequently express a thin greenish pus if the duct has not been occluded. If infection has been carried to the inguinal lymphatics one or more glands will be found enlarged, but seldom contain pus.

In duration a Bartholin abscess lasts from a few days to several weeks. Treated expectantly spontaneous rupture occurs either externally or into the vagina. This is less frequent than external rupture because of a layer of fascia acting as a barrier; since the gland is situated between the superficial and middle layer of the ischio-pubic fascia and burrowing always takes

place in the line of least resistance, which is external. The opening is small but is sufficient for drainage. The interior is a broken down necrotic mass, having a muddy uneven appearance covered with pus and serum.

Relief is experienced immediately upon rupture.

The treatment should be considered under three heads:

- (1) Prophylactic.
- (2) Palliative.
- (3) Curative—Radical.

Prophylactic treatment is valuable here if it is in any condition. When a diplococcus infection is established or suspected the immediate use of antiseptic astringent irrigation should be begun. Potassium permanganate is an example of this class of remedies.

Palliative. If it is determined that we have to do with an unruptured Bartholin abscess anodynes should be used to relieve pain till proper conditions for an operation can be secured. Locally cold antiseptic applications are indicated. This can be well met with the ice bag. The lead and opium wash is advocated. If these fail morphine is indicated and justified on the ground that there is always a possibility of complete extirpation without rupture.

The best method of cure lies in the complete removal of the gland. Many methods are advocated. One formerly in vogue was the removal of pus by a trochar and refilling the sac with melted paraffin. After hardening the tumor could be dissected out without difficulty.

If rupture has not taken place a longitudinal incision is made in the natural fold between the large and small labia. Careful dissection will frequently be rewarded by removal in toto. The dissection should be made on the outer upper and lower surface, and finally from within, since the vaginal wall may be broken and loose tags of mucous membrane be left. Tears in the vaginal mucous membrane are frequently the source of annoyance because of persistent tenderness. Finally silk worm sutures are introduced, care being taken to pick up the bottom of the wound, and leaving a silk worm drain in the lower angle. While this is desired it must be acknowledged to be infrequent.

When rupture has taken place usually the opening must be enlarged longitudinally. This permits the capsule to be dissected out or curetted and cauterized with 95 per cent phenol followed by alcohol. The thermo cautery is advocated and serves well the purpose of destroying the tough glandular capsule and arrest of hemorrhage. The discomfort following the use of this as well as of chromic acid militates against their use. Bleeding is readily stopped by packing. Iodoform gauze is best.

Dressings shall be dry and changed every 36 or 48 hours after being irrigated with Permang. 1-3000 or peroxide. Healing takes place with astonishing rapidity. After a few weeks the line of incision has practically disappeared.

 ◆
 ◆ McLean County Medical Society. ◆
 ◆

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President F. C. Vandervoort, Bloomington
 Secretary A. F. Kaeser, Bloomington

The Society was called to order in the city hall, Bloomington, February 7, 1904, by the president, F. C. Vandervoort.

Dr. J. B. Taylor reported an interesting case of a **Foreign Body in the Eye**. It was a piece of iron and was removed by an electro-magnet. It had happened one day before reporting and at this time the possibility of infection had still to be considered.

Dr. Mammen reported for the executive committee progress made in regard to the State Medical meeting.

A committee was appointed to ascertain the wish of the members concerning the nature of the entertainment on the fiftieth anniversary of our Society.

Dr. Horace Elder read a paper on **The Kidneys and Some Diseases Thereof**.

The doctor took up first the more prominent symptoms common to most of the diseases of this organ and showed what importance ought to be attached to them.

Albuminuria. It is now generally recognized that albumin may often be present in large quantities in the urine and yet that organ may not show any lesion, i. e., it may be a functional albuminuria. This is true after certain kinds of diet and also after the cold bath from which latter fact the doctor reasoned that it is poor practice to advise all our weak and puny patients to take the cold bath. Again we may have very serious renal lesions with very little albuminuria. It will thus be seen that albumin alone is not much of a guide as to kidney lesion.

Cast. These are as a rule of serious import, and yet hyaline casts may not prove any serious condition. Blood and granular casts always suggest a lesion.

It would be well for the physician not to depend upon these two tests, plus the sugar test, but he should in all cases of suspected kidney disease examine for the amount of urea excreted. This when one is prepared for it, is not a difficult test and will always repay us for the added trouble.

The separate disease of this organ were then described in detail and the appropriate treatment outlined.

 ◆
 ◆ Jo Daviess County Medical Society. ◆
 ◆

Regular meetings held Thursday on or before Full Moon of January, April, July and October.
 Membership 20.

Officers.

President G. E. Miller, Hanover
 Secretary D. G. Smith, Elizabeth
 Treasurer T. J. Stafford, Stockton

The Society was called to order for its reg-

ular quarterly meeting in the I. O. O. F. hall, at Elizabeth, January 28, 1904.

In the absence of the president, W. S. Lewis was elected president pro tem for the day. The following members were present: Stafford, Egan, Smith, I. C., Eade, Lewis, Smith, D. G., Wright, Nadig, Stealy, with Dr. Eugene Richard Lewis of Dubuque, and W. E. Clay of Pearl City, as visitors.

Minutes of previous meeting read and approved. The application of Dr. Eugene Richard Lewis of Dubuque, Iowa, was received and on motion the rules were suspended and Dr. Lewis elected by acclamation. The authors of the first two papers on the program being absent, the third topic was taken up: Subject, **The Necessity of Close Attention to Small Wounds**, by Dr. J. H. Stealy, of Freeport.

This was a short and interesting paper, bringing out the small points which are very often overlooked, and taken for granted. The subject was discussed and many questions asked, and the doctor closed by giving the technique in dressing small wounds or amputations and answering all questions.

Several clinical cases were presented. On motion it was decided to meet at Warren, April 28, 1904.

The chair appointed the following to draft resolutions of respect on the death of our vice president, Dr. W. Hutton. Committee, Drs. Godfrey, Wright and Phillips.

A vote of thanks was tendered Dr. Stealy for his excellent paper, and also to the Elizabeth and Hanover physicians for the entertainment received.

 ◆
 ◆ Sangamon County Medical Society. ◆
 ◆

Regular meetings are held in Springfield the second Monday of each month at 8 p. m.
 Membership 73.

Officers.

President B. B. Griffith, Springfield
 Vice President S. E. Munson, Springfield
 Secretary-Treasurer C. P. Colby, Springfield
 Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The Society held its regular monthly meeting February 8, 1904, in the Supervisor's Room in the Court House. Meeting called to order by the president, B. B. Griffith, at 8:45 p. m., with fourteen members present. Minutes of January meeting read and approved. Bills of Edw. F. Hartman Co., \$1.50, and Secretary, \$2.00 were presented and ordered paid.

The application of S. W. Metz was read and referred to the Board of Censors.

The circular which the Secretary was instructed to send the delinquents, was read and approved.

The subject of the evening was **Nasal Myxoma**. Dr. Geo. Clements presenting the histological and pathological conditions and Dr. A. E. Prince the anatomical relations and treatment. A general discussion followed.

Dr. Kreider reported a case of **Colles' Fracture**, the diagnosis being made by X-Rays. He

spoke of the advantages of X-Rays in diagnosis over the old method of manipulation, and of the more favorable prognosis.

This case showed so little deformity that it would have been either treated as a simple sprain or else manipulation of the broken bone to secure crepitus would have made the original injury more serious than it actually was.

He also reported a case of **Ovarian Cyst with Twisted Pedicle** and of the necessity of operating immediately although the examination of urine showed a great amount of albumen and large numbers of granular casts, both of which promptly disappeared within a week after the operation.

Dr. Hopkins related some experiences with **Colles' Fracture**. Dr. Spicer reported a case of **Pneumonia in Child**, with temperature resembling Typhoid fever.

Adjourned.

 DeWitt County Medical Society.

Regular meetings are held in Clinton on the second Tuesday of January, April, July and October. Membership 25.

Officers.

President J. C. Myers, Clinton
 Secretary J. H. Tyler, Clinton

The De Witt County Medical Society convened in county court room, Tuesday, January 12, 1904, at one o'clock, p. m. The president and vice president both being absent on account of the death of relatives, on motion A. E. Campbell was called to the chair.

A report of case of typhoid fever of 110 days standing, and still living, elicited quite a discussion from nearly all the members present. Dr. Wm. T. Dowdall read an interesting paper on **Dysmenorrhea**, which was highly commended by the Society. Adjourned to April.

J. H. Tyler, Official Reporter

 St. Clair County Medical Society.

Regular meetings are held the first Thursday of January, April, July and October.
 Membership 69

Officers.

President C. W. Lillie, East St. Louis
 Secretary B. H. Portuondo, Belleville

The St. Clair County Medical Society held its regular quarterly meeting at Priester's, January 7, 1904, with President Lillie in the chair, and the following members present: Drs. Hagarty, Sasvil, H. Hertel, Applewhite, Housh, Cannady, Adams, Irwin, Raab, Starkel, Hansing, Wiggins, H. C. Hertel, Hilgard, Portuondo, and as visitors Doctors James Moores Ball, and James Slosy.

Minutes of the preceding meeting were read and approved.

Two most excellent papers were the features of this meeting. One by Dr. Housh on **Elbow Fractures**, with X-Ray illustrations;

and the other by Dr. Ball, of St. Louis, on **Iritis**.

Dr. Housh advocated extreme flexion in the treatment of fractures of the elbow.

In discussing this paper H. Hertel said he did not believe in manipulation of fractures, especially about the joints. Let them rest, he said.

Dr. Applewhite objects to the fully flexed position immediately, but approves of gradual flexion.

Dr. Irwin spoke of the abuse of plaster of Paris in all fractures. It is never safe until all inflammation has subsided.

Dr. Sloey believes in extension in most elbow fractures.

In closing the discussion Dr. Housh said that most fractures are best treated by rest and painless position, but in fractures of the olecranon after three weeks some motion should be used to prevent ankylosis. Plaster of Paris when used should be left open for inspection, or at least placed so that the fracture can be readily inspected and manipulated.

In discussing Dr. Ball's paper Dr. Adams emphasized the necessity of making a correct diagnosis, and differentiating between iritis conjunctivitis, and between iritis and glaucoma.

The President appointed Doctors Wiggins, Hansing and Raab to constitute the Board of Censors for this meeting.

Dr. Starkel reported a case of **tubular pregnancy** where an operation was performed after a very small rupture occurred and the patient made a good recovery. He also reported that he had under his care at present another case of ectopic gestation.

Dr. Raab relates a case of what he supposed to be ectopic gestation that had ruptured and become encysted and finally absorbed.

Dr. Irwin mentioned that ectopic gestation also occurred in the lower animals.

Dr. Wiggins spoke at length upon ectopic gestation calling attention to the fact that it occurs generally in women that are sterile, and in those that have pelvic disease.

Dr. Hilgard reported a case of **variolioid** that occurred three weeks after the patient had recovered from an attack of variola.

Dr. Starkel reported a case of **appendicitis** occurring in a man who had an attack of appendicitis nine years previously and which had resulted in the formation of an abscess that ruptured into the rectum. On operating this time he found a gangrenous appendix.

Dr. James Sloey, of Lebanon, made application for membership, and being reported favorably by the Board of Censors, was elected to membership.

The treasurer reported a cash balance of \$19.06 in the treasury.

A bill of the corresponding secretary amounting to \$1.25, was allowed.
 Society adjourned.

Will County Medical Society.

Regular meetings are held at Joliet the second Tuesday of each month. Membership 40.

Officers.

President H. A. Patterson, Joliet
Vice President H. W. Woodruff, Joliet
Secretary-Treasurer J. P. Benson, Joliet
Censors: H. W. Curtis, Wilmington; Marion K. Bowles, Joliet; V. J. Cohenour, Joliet.

A regular meeting was held January 12th, at which the above officers were elected.

Dr. H. W. Woodruff of Joliet reported a case of **Carcinoma of the Larynx** and showed the larynx removed post mortem with microscopical section showing the nature of the growth. The patient was a woman of sixty-two years of age, who had presented herself in October, 1903, with a history of obstructed respirations and aphonia for over one year. There had never been any pain, glandular involvement, or cachexia, which was accounted for by the fact that the growth was entirely intrinsic. Death was due to other causes. The case was discussed by Drs. Stevens, Patterson, Benson, Curtis and others.

Ogle County Medical Society.

Regular meetings are held first Wednesday in January and July, Oregon, Ill. Membership 25.

Officers.

President W. W. Hanes, Mt. Morris
First Vice Pres. Jas. Parkhurst, Grand Detour
Second Vice Pres. J. T. Kretsinger, Leaf River
Secretary H. H. Sheets, Oregon
Treasurer L. E. Schneider, Oregon
Censors: G. M. McKenney, Oregon; J. F. Van Voorhis, Creston; W. H. Livermore, Polo.

The Ogle County Medical Society held a meeting at Oregon, Ill., January 6th. The officers were elected for the ensuing year as above. This was simply a business meeting. W. O. Ensign, our counselor, was present and gave us a very nice talk.

Morgan County Medical Society.

Regular meeting of the Morgan County Medical Society was held in the Library Room; twelve members present.

Application for membership was made by Dr. A. H. Kenniebrew. Laid over under the rules till next meeting.

Dr. T. J. Pitner reported a fatal case of **Pneumonia** in a young man who came from Missouri, during the height of the disease and rode in a hack for an hour in search of a relative. Death was probably caused by wholly unnecessary exposure and exhaustion.

Dr. David Reid reported an epidemic of **Scarlet Fever with Diphtheria**, involving as far as the speaker knew, about twenty cases of Diph-

theria, with one death, that would have been prevented from spreading from the first patient, if the first doctor called had recognized either the diphtheria or the well-marked rash of scarletina which accompanied it in the patient in question.

Dr. F. P. Norbury reported the death of Dr. Askew, an early member of the Society, and asked that a committee be appointed to draft resolutions concerning the same.

Dr. J. W. Colbert then presented a paper on **Sleeplessness**. After the discussion of this paper the Society adjourned.

Winnebago County Medical Society.

Regular meetings are held in Rockford on the second Tuesday of each month. Membership 50.

Officers.

President W. B. Helm, Rockford
Secretary C. S. Winn, Rockford
Member Com. on Legislation D. Lichty, Rockford

Treatment and Prognosis of Chronic Bright's Disease.

By Chas. S. Winn, M. D., Rockford.

In order to obtain a clear understanding of the treatment of chronic Bright's disease I have found it necessary to carefully study two important classes of drugs, namely: Diuretics and Diaphoretics. Accordingly I shall consider it fitting to open my subject by giving a brief resume of the two important classes of drugs mentioned. I shall not refer to these in detail in the body of the paper but shall simply refer to them as a class.

The physiology of the excretory organ has not been definitely settled but for a working basis we are safe in considering the following: The water of the urine and a greater part of the constituents, filter through Bowman's capsule. The tubules possess absorbing and secretory powers, absorbing water and substances of use to the organism, secreting urea and uric acid. Hence, the less time the urine remains in the tubule the less these changes; e. g., urine of diuresis is rich in water and low in sp. gr. with a reduction of acidity, etc.

Diuretics may be briefly classed as: (a) Drugs acting on the circulation and (b) drugs which act by direct stimulation of the kidney cells.

Drugs acting on the circulation are (1) Those which produce changes in the circulation per se and (2) Those which alter the composition of the blood.

Rapidity of the circulation increases filtration; rapidity of filtration varies with the difference between pressure of a liquid on both sides of a filtering membrane i. e. on one side is the urine—pressure, practically zero, on the other capillary-pressure which can be greatly varied; hence the filtration of urine, then, is within certain limits, in proportion to the pressure in the capillaries of the glomeruli. The pressure in the capillaries is increased by an increase in blood pressure alone and by dilata-

tion of the renal vessels. No drug however, will produce these changes in pure form.

Drugs which increase general blood pressure may be classed as: (a) Those which raise the efficiency of the heart, e. g. digitalis in moderate doses, strophanthus, sparteine, etc., and (b) drugs which increase output of heart, e. g. the administration of plain water or in the form of a mineral water, lithiated, or saline solution per rectum or subcutaneously.

Drugs which dilate the renal vessels include all of the vasodilators, e. g. nitrites, potassium iodide, spts, etheris nitrosi, etc. Those which change the composition of the blood are the inorganic acids, dilute, e. g. lemonade and the alkaline carbonates; the vegetable acids which are converted into carbonates in the blood, e. g. potassium acetate freely diluted, which is non-irritating.

Drugs which act by direct stimulation of the kidney cells are caffeine and theobromine. These produce diuresis without any irritant action. In most others the action is more in the way of an irritation of the kidney cells, which is not desirable in any diseased condition of the kidney. Hence all others are contraindicated in nephritis.

The indications for diuretics are: (a) To remove accumulation of liquids, except of renal origin. (b) To remove toxic substances from the organism. (c) To dilute the urine.

Diaphoresis may be produced by: (a) Application of external heat, [Hot air, vapor, water or sand baths.] (b) Prevention of loss of body heat, [Protecting from external temperature, prevention of evaporation.] (c) Artificial through internal means. [Hot drinks.] (d) Dilatation of cutaneous vessels. (Alcohol, hot punch, nitrites, spts, etheris nit. also opium in Dover's powder and by irritation of cutaneous vessels, e. g. aconite in small doses, sinapisms.) (e) By production of a mild degree of nausea. (Any of the emetics or Dover's powder.) (f) By the stimulation of the sweat center (Camphor, or better liquor ammonia acetatis.) (g) By stimulation of the peripheral secretory nerves (Pilocarpine series.)

Indications for diaphoresis: (1) The removal of pathological liquid from the body, e. g. absorption of exudates, obesity. (2) To remove poisons from body, as As. Hg. Pb., nicotine, morphine, bacterial products, etc. (3) To re-establish disturbed circulation in the skin, i. e. to relieve congestion of internal organs. (4) To relieve inflamed or over-taxed kidneys. (This removes large amounts of excrementitious materials, hence physiological rest to the kidneys.) (5) To increase the alkalinity of the tissues, e. g. gout, diabetes, etc. (6) To stimulate glandular activity. Urine may be made alkaline by pilocarpine alone.

No hard and fast rule can, or ought to be laid down in the treatment of chronic Bright's disease. Each case individually and in its different phases, demands the exercise of discrimination and judgment based on as accurate an estimate as can be made of the condition and capacity of the kidneys, the state of the circulation and activity of the other excretory organs and on an intelligent observation of

the immediate effects of treatment on the urine, pulse and nervous system. No medicament capable of exerting a curative influence upon nephritis is as yet known.

Although chronic Bright's disease is thoroughly established by the time it comes under the care of the practitioner, there are still indications for dealing with its recognized causes. In fact, the lardaceous form, if not too far advanced, may actually be remedied by removal of the primary disease in which it originated. It is undeniable that drain-poison, alcohol, lead, cold, damp, gout and free living aggravate as well as originate chronic Bright's disease. The indication is perfectly clear, to remove, forbid, or otherwise deal with these and other causes as far as our opportunity affords.

It seems appropriate to consider here the pathological indications for the treatment of chronic Bright's disease. With our comparative ignorance of the intimate pathology we are forced to content ourselves with ascertaining the plain indications afforded. First, by the local lesion in the kidney itself and secondly, by the remarkable series of changes associated with renal disease to be found in the cardio-vascular system.

The different clinical phenomena of chronic Bright's disease present a variety of meanings and would be dangerous guides if accepted as direct indications for symptomatic or palliative treatment, without due interpretation. Some are manifestations of destructive processes in the kidneys, blood and vessels, e. g. debility, wasting, vomiting, anemia, anasarca and renal dropsy. Others are evidences of the efforts at compensation being made by the heart and vessels, e. g. hypertrophy, increased tension and polyuria. Some of the symptoms, like headache, cerebral hemorrhage, vertigo, etc., have to be regarded as unfortunate effects of such a conservative provision. Hence it is quite evident that the practitioner must employ his clinical observation very cautiously indeed. The physiological relations, as well as the pathological process, in which they originate must first be investigated and, as far as possible, understood. The indications furnished by changes in the urine must not be overlooked. In the large white kidney the diminished urine, high sp. gr., abundant albumen and casts point to the necessity for diuretics. In the granular kidney, the excessive flow of pale light urine, with little or no albumen and few, if any, casts, proves that there is no blocking of the tubules to be cleared away, but that, on the other hand, excretion is being carried on under abnormally high pressure. A conclusion obviously full of therapeutic suggestions, if it can be turned to practical account.

The one morbid condition which is appreciated most readily and to which much importance is attached by some practitioners, is albuminuria. The indications furnished by albuminuria are as yet symptomatic only. It is to be regarded only as significant of a pathological state. It does not call for direct treatment. It is doubtful whether patients suffer much in direct consequence of the drain of serum through the kidneys. At any rate they

do not die of albuminuria. Hence attempts to reduce albumin by drugs are not necessary and not to be recommended. Of more importance is the volume of urine and deficiency of urea. I do not mean to infer that albuminuria is to be despised by any means. It is to be regarded as an index of the pathological changes and thus an indirect guide to our treatment. The amount of albumin varies definitely with the action of rest and diet and the use of certain drugs.

The cardio-vascular system in chronic Bright's disease comes to the assistance of the kidney by a rise of tension and hypertrophy and thus affords compensation for renal inadequacy.

Permit me to deviate a moment to the pathology in relation to vascular tension: The accumulation of excrementitious materials in the blood consequent on defective elimination, and original cause of kidney disease, such as lead, mercury arsenic, alcohol, free living, etc., acts on the vaso-motor system and vessels and causes active contraction and ultimate thickening of the arterial walls; the increased peripheral resistance produced in this way, and by the mechanical block in the kidney, and probably the morbid condition of the blood itself, stimulates the left ventricle which proceeds to hypertrophy. The high blood pressure thus established between the central heart and the peripheral resistance effect compensation for the renal inadequacy by a greatly increased flow of urine which, although watery, may carry with it an actual excess of urea in the course of 24 hours. However conservative this high blood pressure is, it soon becomes costly and dangerous, producing headache, nausea, vertigo and other symptoms of circulatory disturbance, and may finally lead to rupture of the diseased and strained vessels, particularly those of the brain.

From these facts the position we ought to assume becomes obvious. We must try to restore the normal amount of elimination from the blood, (which is the object of the high blood-pressure) without over-taxing the circulation, thus saving the patient from living in so hazardous a position as the possibility of a bursting blood vessel. This must be attempted by reducing ingesta, reducing blood pressure and metabolic waste, by opening other channels of excretion, by increasing activity of renal tissue which remains healthy and by removing intratubal block when present. An important indication is also to safeguard the organs which are known to be the favorite seat of hemorrhage. The brain and retina must receive special attention. The patient must be cautioned against ordinary causes which determine vascular rupture, such as muscular strain, excitement and excessive eye-strain.

Hemoptysis and hematemesis may also call for treatment. Grave harm has been done by considering bleeding from the lungs as tuberculous and treating it accordingly.

The management of the heart in chronic Bright's disease is one of the greatest difficulties. Referring to the pathology of the circulatory system, you will readily see how important and difficult this will be. Cardiac

failure must be treated by lowering blood-pressure, in spite of the depression, by purgation and diaphoresis; the heart must have direct and indirect help when such a condition presents. Digitalis combined with potassium iodide or nitroglycerin is now called for. The dropsy that accompanies the cardiac failure may call for treatment in order to relieve distress and possibly avert the danger which it entails. The treatment for the heart, digitalis, caffeine, etc., as well as purgation, diaphoresis and diuresis may be sufficient. Dr. Wm. Ewart has a novel plan of treatment. He proposes to unblock the lymphatic ways which are blocked by edema, to establish a thorough flow of blood into lymph channels and to quicken the lymphatic circulation by allowing edema to collect in the lower limbs and then incising or puncturing and draining, thus relieving edema and affording another channel of relief.

Prophylactic Treatment: The prevention of chronic Bright's disease becomes a part of the practical management of scarlet fever and other acute specific diseases, digestive and hepatic disorders, gout, gravel and those acute inflammatory affections of bones, lungs, etc., in which lardaceous degeneration originates.

Uric acid, lead and alcohol are the poisons in which granular kidney arises, as from an excess of the products of free-living and laborious, anxious occupations or the two combined. Improved surgical treatment prevents many cases of the lardaceous form. The ordinary body excreta thrown on the kidney in great excess may be the beginning of a chain of pathological conditions which may lead to chronic Bright's disease.

The care of patients during and following convalescence from the acute infectious diseases is of great importance. We must remember that the alcoholic carries an excretory system of extreme susceptibility which might be called a specific liability of the kidney to inflammation.

Hygiene: Physical exercise should be carefully graded and is of great importance. It should be moderate and regular and if climate is warm and dry, in the open air. Patients should never be subjected to the vicissitudes of worry, anxiety, or tension of competition. Indulgence of whatever nature, if they tend to disturb the equanimity of the patient, must be strictly prohibited.

Tepid baths, morning and evening. (temp. 95.) patient remaining in bath 15 minutes, then be dried with a warm towel, putting on warm shirt and avoiding sudden cooling of the body.

Rest will also reduce the amount of poison of intrinsic origin which must be eliminated by the kidney.

We will find that under certain conditions the diet will have to be modified. We will find no food as good as milk in tubal nephritis. We must bear in mind that the carbohydrates and hydrocarbons must in all cases form the chief part of the diet.

Climate: The ideal climate for chronic Bright's disease is a warm equable climate rather free from moisture and not too high in altitude, such climate as exists in Western Texas, Arizona or Southern California. The

dryness of these regions increases the elimination of fluid by the lungs and skin and thus helps to relieve the work of the kidneys. Patients must make such a change early in the disease and not wait until edema has become extensive and heart failure has developed with its consequent sequelae. The patient is then too feeble to derive any benefit from such a climate. He had better remain at home and enjoy its comforts while the death angel hovers over him.

Diet: Diet in chronic Bright's disease is a very difficult question to consider. We wish to keep up the nutrition, without over-taxing the kidneys, sustaining, yet not poisoning the blood by leucomaines, uric acid, etc., preserve the blood-pressure at a sufficiently high, but not to a dangerous height, also to maintain the degree of compensation without breaking. Hence you will readily see that the matter of diet becomes a most particular and puzzling problem. No wonder there is such a divergence of opinion.

The guiding principle is to preserve an even delicate balance and to be able to throw in a weight either way at the first indication. This must be almost as exact, as the man who understood his team so well that he could load them so close that by throwing his mittens on the load the team could not move it, taking them off they started off readily.

It is quite certain that the diet has been and is now too often overdone, especially in the quiescent stage. Strictness is often excessive. Patients have suffered and died of cardiac failure from being deprived of nitrogenous foods. The word **nutrition** should stand out like our electric signs on State street when we are considering the diet of chronic Bright's disease. A perfect balance can not be maintained on milk alone neither on a vegetarian diet, some nitrogenous food is necessary to promote metabolic changes, but it must be so graded that the intake shall not strain the capacity of the eliminative organs, especially the kidneys. Food must be easily digestible in order not to disturb digestion which would depress the heart, increase the uric acid and raise vascular tension. Food must possess sufficient variety to be attractive. If you are giving milk, administer it in different forms, boiled, junket, peptonized, perhaps later potato soup, vegetables dressed in various ways, fish, farinaceous materials, light vegetables and a full supply of hydrocarbons in the form of fats, as yolk of eggs, crisp hot bacon, cold ham, etc. The diet must approach that of health as nearly as possible, without inducing disorder; hence we must be bound by no inflexible rule or regimen. Alcohol must be prohibited.

Milk has, from time immemorial, been first in the minds of all practitioners as soon as the diet of chronic Bright's disease comes under consideration. Later a vegetarian diet and still later a mixed diet, limiting nitrogenous foods according to the case under treatment.

Milk has many advantages as well as disadvantages. Its advantages are that it is easily procured and within reach of nearly all of our

patients, not expensive and usually acceptable. A strict milk diet may be continued usually from two to four weeks at a time, when a change may be gradually made and the kidneys carefully watched. The effects of an exclusive milk diet are in many cases remarkable and gratifying. The quantity of urine, urea and extractives increases, while the albumin diminishes and edema and general anasarca disappear. The patients strength and general condition improves. The quantity of milk to be prescribed varies with the age and size of the patient, as well as the ability to assimilate and take exercise. If confined to bed 5 to 7 pints daily are quite sufficient. If patient loses weight on an exclusive milk diet you may add farinaceous food such as rice or bread. Many persons will live contentedly with no other food than a bowl of bread and milk four or five times a day. It is very important to thoroughly cleanse the mouth after taking milk to avoid coating of the tongue and a disagreeable taste in the mouth, which destroys the appetite and causes a disgust for the milk and thus interferes with the treatment. Obstinate constipation will usually result and must be looked after by gentle laxatives or better, citrate of magnesia each morning. Where the milk diet is impracticable from any cause, foods made up largely of milk in a tempting manner should be tried, e. g. with rice, bread or light farinaceous food in puree's, flavored with lemon or orange.

"Saundby's rule is to eat very sparingly of butchers meat, avoid malt liquors, spirits and strong wines."

Among the various objection to milk are; that it is insufficient for an adult, since four quarts of milk furnish but $6\frac{1}{2}$ oz. of carbohydrates while the amount necessary for an adult in a state of absolute repose, is $10\frac{1}{2}$ oz. Weak and lymphatic subjects can support a diet of four quarts of milk daily. Hence a mixed milk diet with vegetables (boiled) or roast fish, boiled meats and game. Milk used to excess in chronic Bright's disease leads to anemia. Several cases are reported in which a resumption of the ordinary diet brought about a marked improvement. Exclusive milk diet then, is to be reserved for acute Bright's disease or acute exacerbations of chronic Bright's disease and here an average of from one to two weeks of exclusive milk diet gives all of the good one can reasonably expect. The way to attack the problem therefore, is to carefully observe the condition of the urine and the condition of the patient upon different diets. In the more advanced cases the diet should be as nutritious as possible and then fresh meat, chopped fine, fish and vegetables are not to be refused. Lean meat once a day may be allowed in favorable cases, fruits and light well cooked farinaceous foods. Tea, coffee and cocoa may be drunk.

Medicinal: The multiplicity of remedies is always a sign of a lack of direct therapeutic knowledge and it is no exception in the treatment of chronic Bright's disease. The treatment of the pathological indications as they arise, by means of the proper remedies ration-

ally applied, seems to be the wisest course to pursue. The bowels should be kept free by laxatives, or better by mineral waters. Bitter tonics, acids and alkalies should be administered according to the condition of the stomach and bowels. High vascular tension must be met by a cautious use of nitroglycerine in gradually increasing doses, one mm. being the initial dose, the intervals must be comparatively short and just enough to cause a feeling of fullness in the head or to slightly quicken the pulse. Low vascular tension with scanty albuminuric urine, edema and signs of dilatation, require heart tonics combined with purgatives, diaphoretics and diuretics, digitalis, strychnine, or caffeine citrate. Iron is contra-indicated in acute exacerbations of chr. Bright's disease. "Iron is more promptly and dangerously harmful in chr. Interstitial Nephritis than any other form of Bright's disease." The form in which iron is best born is chr. Parenchymatous Nephritis. "Basham's mixture is no more diuretic than the bulk of water which constitutes its menstruum."

Complications: Secondary congestions of internal organs and serous cavities, which are often the immediate cause of death, must be met by measures directed to local as well as primary fundamental conditions. The treatment for the complications does not differ from that of the same conditions due to their causes, hence I will not worry you with its details.

Surgical: In 1891 Edebohls described an operation called decapsulation of the kidney as a cure for chronic Bright's disease, and in an instructive article describes the operation and gives a report of the cases in which he resorted to it. The cases were 18 in number. Six of the operations were primarily performed for moveable kidney, in five there was no thought on his part of benefiting the existing kidney disease. Four of the number made a complete recovery. Of the 18 cases operated by Edebohls 5 had right chronic interstitial nephritis, 4 left chronic interstitial nephritis, 4 right and left and two right and left chronic parenchymatous nephritis and three right and left chronic diffuse nephritis. In 14 of the 18 both kidneys were operated upon at one time and two at two different times. In 4 on one kidney only, always the right one. That one kidney could have Bright's disease was a surprise to him. He believes that in many it may begin in one and both become involved before death. This treatment leads to a cure by establishing proper circulatory condition. Where diagnosis is clear as to unilateral disease, which with our present methods can be done, nephrectomy may be performed or more frequently nephrotomy.

In conclusion I will say that the best we can do is to improve the state of kidneys and other organs by care and through the proper use of drugs. As Tyson has aptly put it, "We must try to arrest the development of the renal lesions and improve the general health, treat

the symptoms which are not dependent upon the nephritis, except indirectly, and lastly, treat those signs which are due to the nephritis itself."

Prognosis: The prognosis in general is bad. While many suffer from chronic interstitial nephritis for years and live in comparative comfort there is still but one outcome; eventually the arteriosclerosis determines cardiac disease and the patient becomes subject to repeated cardiac or uraemic attacks, of increasing intensity, or dies from apoplexy, oedema of the lungs, or some intercurrent disease. The prognosis is more favorable in children than in adults, and there are cases on record of subsidence of symptoms and recovery after an illness extending over two years. Albuminuric retinitis renders the prognosis very grave. The prognosis depends greatly on the amount of urine passed in 24 hours and upon the amount and persistency of the albumin.

 * Rock Island County Medical Society. *
 * *****

Meetings are held in Rock Island the third Tuesday bi-monthly at 8 p. m. Membership 50.

Officers.

President W. P. Freek, Cordova
 Vice-President.....
 Secretary T. J. Lamping, Moline
 Official Reporter.....G. L. Eyser, Rock Island

The regular bi-monthly meeting of the Society was held at the Hotel Horms at eight o'clock Tuesday evening, February 9, 1904.

Vice President Dr. C. C. Carter of Rock Island, presided.

There were present Drs. Carter, T. B. Hall, Meyers, B. F. Hall, Hollowbush, First, Asay, Ostrom, Bernhardt, Comegys, Purdun, Foster and Eyser of Rock Island. Drs. Lamping and Anderson of Moline, Dr. Eddy of Milan. Visitors, Dr. W. L. Baum, of Chicago and Dr. J. P. Crawford, of Davenport, Ia.

The programme for the meeting consisted of an address to the Society on the subject of *Diphtheria*, by Dr. W. L. Baum of Chicago. This consisted of a schematic drawing of the statistics of all cases of Diphtheria treated in Cook County Hospital since 1895, being the period of Anti-toxine treatment.

The deductions drawn from these many thousands of cases, were most instructive and convincing, and were much appreciated by those who had the privilege of hearing them.

Numeous points of the address were discussed by Drs. Crawford of Davenport, Hollowbush, Carter, Asay, Hall Meyers, Eddy, Lola and Eyser.

On motion the legislative committee of the Society was instructed to investigate the standing of several irregular practitioners in the county.

The Society then adjourned to meet on the second Tuesday in April.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street..... President
FRANK X. WALLS, 4307 Ellis Avenue.....Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....Treasurer
W. A. EVANS, 103 State Street..... Chairman Medicolegal Committee
WM. HARSHA, 103 State Street Chairman Membership Committee

MARCH, 1904.

At the meeting of January 6th, the following paper was read:

Infection with *Trichuris Trichiura* (*Trichocephalus Dispar*) with the Report of a Case.

By Fred Fanyo, M. D., from the Pathological Laboratory of Cook County Hospital.

For the discussion of this paper, see p. 683.

Owing to the relative frequency of infection with the *Trichuris Trichiura* and the comparative infrequency of its demonstration the following case is deemed of sufficient interest to be reported.

Short abstract of the clinical history:

C. G., an Italian fourteen years of age, a boot black by occupation and a resident of this country for the past two years, was admitted to the Cook County Hospital November 5, 1903, to the service of Dr. Edwards, suffering with what appeared to be a broncho-pneumonia. He had been entirely well until two weeks before entrance, when he was taken with headache, loss of appetite, cough and expectoration of a small amount of yellow mucus. There had been no chills and bowels were loose moving two or three times each day. His past and family history revealed nothing of interest.

Examination at that time showed a poor development with considerable emaciation, a languid expression and hesitancy in replying to questions. Coughing was frequent, short and hacking; respirations 36, pulse 110, temperature 102.8. Physical examination was negative with the exception of the lungs which showed slight loss of resonance over the left apex and over the right base posteriorly. On auscultation large moist bubbling rales were heard over both lungs more marked on the left side and especially over the apex. There was very little change in vocal fremitus. The reflexes were normal and no areas of anaesthesia were found. At twelve o'clock midnight of the day of admission his temperature rose to 104 and the respirations to 40. Considering the possibility of a tuberculosis a morning specimen of sputum was examined, but no tubercle bacilli were found. Examination of the eye-grounds was negative. Under catharsis and stimulation his temperature improved slightly. On the day following his admission an examination of the serum for its

agglutinative action upon typhoid bacilli was made, with negative results.

November 7th, two days after admission, his sputum was again examined and a small bacillus resembling the bacillus of influenza was found in stained specimens, but no tubercle bacilli. November 10th, sputum was again examined with a like result.

A blood culture made in bouillon developed only the staphylococcus epidermidis albus which was considered a contamination.

Continuance of the symptoms and difficulty in accounting for them led to an examination of the feces, November 13th. They were found yellow, semi-fluid and contained a few small dark clots and the ova of the *Trichuris trichiura* in large numbers; no worms were found. The following day a blood examination showed 4,500,000 red cells, 70 per cent hemoglobin and 8,000 leucocytes. By differential count no eosinophilia could be demonstrated.

November 15th, he was given 1 gramme thymol, followed in a few hours by calomel and podophyllin. An examination of the feces showed the ova in great numbers, but as before no worms. His temperature now gradually subsided until it reached normal. On the 17th, 3 grammes thymol was given followed by free catharsis; no worms were obtained after careful examination.

Examination on the 18th, showed the chest entirely negative, temperature normal and the patient bright and cheerful. He was now given 4 grammes oleoresin of male fern, followed in four hours by calomel and podophyllin with sodium phosphate four hours later. Examination of the feces again failed to reveal worms.

November 27th, the same medication was repeated with a like result. At this time the patient was feeling so well that he could not be induced to remain in the hospital and was therefore discharged November 28th.

As indicated in the foregoing record in several examinations of the feces the ova were found in large numbers, but no worms.

Although it is apparent that the symptoms that brought this patient to the hospital were not entirely due to the presence of the trichuris, it is nevertheless very likely that these parasites produced some of them.

The ova of the parasite are very characteristic, resembling a foot ball in shape, brownish

in color and present a double contoured shell with a projection at each end that has the appearance of an almost transparent plug. They measure .05 to .06 millimeters in diameter, are very resistant to drying and are crushed with difficulty. On examination with high power lenses (1-12 oil immersion) the contents seem to be made up of fine granules. Their detection in the feces is not difficult. A small portion of the fecal matter is placed on a slide and a drop of water or glycerin added, a cover-slip applied and search made at first with a low power lens (2-3 in. objective). With this amplification the characteristic oval shaped can be seen and the high power then used to determine their identity. In fresh feces the eggs appear of a darker brown than after they have been mounted for some time. If the ova are not very abundant the feces can be placed in a large wide-mouthed bottle, water added and the contents agitated for a few minutes. After allowing the contents to settle the supernatant liquid is poured off including all the fecal material that will float. This washing is repeated two or three times and the resulting mass examined as described. A screen has been described¹ for separating the coarser fecal material, but it is not very successful and its use rarely required.

The adult worms measure from 4 to 5 centimeters in length; the male being somewhat shorter than the female. The anterior portion which forms at least three-fifths of the body is extremely thin and hair-like in contrast to the thick hinder portion which in the female is conical and pointed and in the male obtuse and usually rolled like a spring. The thin anterior portion is used to attach the worm to the mucous membrane of the intestinal wall, the worm being destitute of hooks possessed by many other closely related intestinal parasites.

Askanazy² has shown by serial sections that the worm really bores its way through the mucosa, often in a tortuous manner and has also demonstrated that the common whip worm does not subsist on the contents of the alimentary canal, as generally supposed, but derives its nourishment from the blood of the mucous membrane. In the intestine of the worm he found that the brown pigment, formerly thought to be obtained from the feces of the host, gave the reaction for iron and therefore must be derived from the hemoglobin. He also disproved the old supposition that the esophagus of the worm is too narrow to permit the passage of the red cells, for although it is in some places but ten micro-millimeters in diameter, it is also very elastic and there is therefore no mechanical obstruction to the swallowing of blood by the parasite.

The parasite is widely spread, Osler³ stating that in parts of Europe it occurs in from ten to thirty per cent of all bodies examined, but it is not so common in this country. Simon⁴ gives for its distribution Europe, North America, Asia, Africa and Australia.

Weinland⁵ writing in 1858, says that it is common in Germany, not infrequent in the children of Anglo-Americans, rare in Massachusetts, but frequently found in the negroes of Pennsylvania. Boggess⁶ reports the finding of the ova in a case of uncinariasis and Schaefer⁷

accidentally found them in another case, the feces of which after the administration of the ethereal extract of male fern revealed one adult male *Trichuris trichiura*. Thymol was then given resulting in the expulsion of many uncinaria but no trichiura. Subsequent examination, however, showed persistence of the ova of both parasites.

In a statistical study of the intestinal parasites of 500 white male patients at the United States Government Hospital for the Insane⁸ Garrison, Ransom and Stevenson, found infection with the *Trichuris trichiura* in 54 cases or 10.8 per cent. These investigators give a summary of the observation of intestinal worms in the United States, Europe and India which shows infection with the *Trichuris* in from 2.57 per cent to 45.2 per cent of all cases examined, the latter having been found in 230 cases examined by Hessig in Germany in 1893.

So far as I am aware, the ova have been found in but one other case in Chicago, and that in conjunction with an uncinaria and reported by J. A. Capps⁹.

The living worms are only rarely found in the feces¹⁰ but are more readily detected post-mortem and are then found in the caecum and other parts of the large intestine. They have also been noted in the vermiform appendix. Heine¹¹ states that in post-mortems held soon after death, the worms are attached to the mucous membrane, but in those held after five or six days they are free in the intestinal canal.

Infection occurs only by means of the eggs and is probably most frequently carried by drinking water, as, owing to the great resistance of the eggs, they remain viable for considerable periods outside of the body. As infection has been experimentally produced by their introduction per rectum¹² it suggests the possibility of infection in that manner.

The symptoms of Trichuriasis are manifold and simulate many affections; the only specially characteristic sign being extensive cutaneous anaesthesia and that only, occasionally noted¹³. Hausmann cites the case of a young and healthy man infected with *Trichuris* who became emaciated, constipated, with severe abdominal pain and diminished reflexes. The symptoms grew progressively worse but promptly cleared up after the administration of thymol. Several cases have been reported in which a profound anemia occurred and if we recall the fact that the parasites derive their nourishment direct from the blood, we can readily see why this occurs. Why it does not occur more frequently is probably due to the few parasites ordinarily present. When occurring in enormous numbers they may cause intestinal obstruction and Galli¹⁴ calls attention to the *Trichuris* as an etiological factor in appendicitis. Numerous authors suggest the possibility of a causal connection between infection with the *Trichuris* and beriberi. The absence of well marked symptoms in some cases as before stated, is probably due to the few parasites present. The occurrence of an eosinophilia in the disease has not been constant.

The diagnosis is made by the finding of the characteristic ova in the feces and Hausmann believes that the microscopic examination of the

feces should become a routine measure in all dubious cases and rank in importance with urinalysis. If this were done, many affections now classed as rebellious hysteria or gastric catarrh would disclose their true etiology and would respond promptly to appropriate measures.

Thymol seems to have a specific action in infection with this parasite, far more powerful than santonin or other anthelmintics. In Housmann's case he gave a dose of thymol on three successive days which relieved the symptoms, but the treatment was repeated a short time after as a precautionary measure.

As in cases of uncinariasis, thymol is administered, two grammes at 8 a. m., and two grammes at 10 a. m., followed by cathartic doses of castor oil or magnesia at 12 o'clock. The diet should be milk and soup. If necessary this treatment may be repeated after an interval of one week. The maximum dose of thymol was not employed in this case on account of the general debility of the patient and the possibility of other affections. This may explain the unsuccessful search for the adult parasite.

1. *Progressive Medicine*, 1903, Vol. IV., 51.
2. *Deutsches Archiv. fur Klin. Med.*, 1896, LVII.
3. *Principles and Practice of Medicine*, 1901, 364.
4. *Clinical Diagnosis*, 1902, 250.
5. *Tapeworms of Man*. Cambridge, Mass., 1858.
6. *Public Health Reports*, Nov. 1, 1901.
7. *Medical News*, 1901, LXXIX, 655.
8. *Hygienic Laboratory. Bulletin No. 13*, 1903.
9. *J. A. M. A.*, 1903, XL, p. 28.
10. *Simon*, 1. c., 250.
11. *Centralblatt f. Bakt., etc.*, 1900, XXVIII, 779.
12. *Heine*, 1. c., 779.
13. *Hausmann. J. A. M. A.*, 1900, XXV, 719.
14. *Centralblatt f. Bakt., etc.*, 1903, XXXIV, 350.

January 20, 1904. The meeting was devoted to a Symposium on Dietetics.

The Dietetics of Atonic Dilatation of the Stomach.

By Fenton B. Turck, M. D., Chicago.
(Abstract.)

The author discussed the physiology and pathology in relation to atonic dilatation, as well as the therapeutics based on the pathology. He divided the mechanical work of the stomach into three stages:

1. Distention with food.
2. Expulsion.
3. Relaxation.

He said that the normal resistance at the pyloric end of the stomach increases the tension (lateral pressure), which, within physiological limits, increases the stimulus to more powerful and frequent contractions. At the end of digestion the maximum degree of power and number of contractions are obtained. Atony and dilatation may be found as the result of increased re-

sistance in front, such as by stenosis of the pylorus, and cause prolonged overwork and exhaustion of the gastric muscles, or the overwork and exhaustion may be due to the constant and excessive work upon the load within the gastric cavity when no obstruction exists. The overwork and ultimate exhaustion are the same in either case, but the pathology and therapeutics are a different question. In determining the exact regimen of dietetics in atonic dilatation, all symptoms and conditions must be subordinated to the one central indication, namely, the restoration of the exhausted gastric muscle. In order to apply therapeutics specifically, the degree of exhaustion must be measured. He said the two main pathological conditions to be corrected in simple atonic dilatation of the stomach are the exhaustion of the gastric muscles and bacterial growth in the gastric cavity. The main effort must be directed against the muscle weakness, not only for the nutrition of the patient, but for the prevention of bacterial growth and the resulting toxins which produce many of the grave symptoms found in this serious malady. To correct the muscle weakness and allow the musculature to recover, it may be necessary to lessen the total amount of food for a period, and undernourish the patient, thus giving rest to the diseased organ at the expense of the whole organism. The gain here is twofold: (1) Food is better digested; and (2) it is not robbed of its nutritive value by bacterial growth.

In the beginning of a course of dietetic treatment, after the stomach has been placed at complete rest, the question of the character, composition, preparation, and time of giving food presents itself. A uniform diet for all the degrees and forms of atonic dilation can not be arranged, but the author presented a few examples. Theoretically, a liquid diet is most advantageous; practically, finely divided solid food is best, properly prepared, with appropriate amount of liquid, sufficient to aid the stomach to macerate the mass and inject it into the intestines. Usually two meals a day are ordered, one in the morning and one in the evening.

In connection with diet, certain mechanical methods of treatment are not only useful, but often indispensable. For the mechanical effect, lavage is recommended by most of the textbooks, and added to this galvanic and faradic electricity, general baths, exercise and drugs. A large number of the patients he had treated in the last ten years had all these methods used without success, often with harmful results. He has presented many of this class of patients, after a course of treatment, before the Society, on several occasions. He has also pointed out the objections to lavage. It has its use in complete stagnation as a palliative measure. Those methods are most valuable which will mechanically affect the gastric muscles direct, without washing out the necessary nutriment and secretions from the stomach cavity. Riegel seems to have obtained but little benefit from the use of static, galvanic or faradic electricity. The speaker has found high frequency with the Oudin resonator of considerable benefit as an adjuvant.

Diet in Hyperchlorhydria.

Dr. B. W. Sippy.

In a paper on this subject, said that hyperchlorhydria designates a condition in which an abnormally great quantity of hydrochloric acid is secreted during the time the food is in the stomach. The subjective symptoms of the condition are referable chiefly to the irritation produced by the excessive quantity of hydrochloric acid upon the nerve endings of the mucous membrane and stomach and the adjacent esophagus. The following symptoms are more or less distinctive: Gastric discomfort, appearing from one to two hours after eating, combined often with eructations of gas, a feeling of fullness, burning sensation in the stomach, heartburn, acid pyrosis, rarely nausea, and still more rarely, vomiting. Patients seriously afflicted restrict their diet because of fear of distress after eating; they lose weight, become irritable, and form by far the largest contingent of the chronic dyspeptics. Accuracy in diagnosis demands chemical analysis, which is simple. When hydrochloric acid is in excess to the normal, surplus symptoms may be present or not, depending largely upon the sensitiveness of the nerves of the gastric mucosa. Even a very high grade of hyperchlorhydria may produce no symptoms. Such a hyperchlorhydria is said to be latent. In some cases a hyperesthesia of the mucous membrane to normal acidity is present. Clinically, such cases are symptomatically hyperchlorhydrias, and are inseparably related to hyperchlorhydria as determined by chemical analysis. In the treatment of the condition diet is all-important; but etiology must be taken into account in each case. The following causes were mentioned: Hasty eating, improperly prepared food, overeating, certain ill-defined disorders of the nervous system are responsible in many cases. Frequent in neurasthenics; secretion may be increased or abnormal sensitiveness of the nerves may be induced by mental states, nervous shock, worry and fatigue. The anatomical causes that are operative are ulcer, with or without pylorus spasm. In the irritative stage of gastritis, hyperchlorhydria may be present. There may be benign pyloric obstruction. There are certain toxic causes, chiefly the abuse of alcohol and tobacco. Fortunately, by close attention to diet alone most cases may be satisfactorily treated. The diet should fulfill the following indications: First, mechanical, chemical and thermal irritation of sensory and secretory nerves of the stomach by food and drink must be reduced to the minimum. Second, food should contain a liberal quantity of albumin to combine with the excessive hydrochloric acid. Third, the diet must be sufficiently nourishing. Fulfilment of indications is simple. All foods should be taken in a state of fine subdivision, and great care given to thorough mastication. Meat should be scraped or finely teased apart. Potatoes and all vegetables should be given in as near puree form as possible. Pickles, potato salad, fried potatoes, coarse nuts, radishes and similar coarse articles should be avoided. Coffee, spices, sharp condiments, mustard, pepper, vinegar, acids, and alcoholic drinks should be avoided. Hot and cold food and drink should be avoided.

The diet should be a mixed one, containing albumin, fat and carbohydrates. In the beginning of the treatment a liberal quantity of albumin in the form of lean meat should be given, because it is non-irritating and combines a maximum quantity of hydrochloric acid. Fat in the form of butter and cream is well tolerated, and tends to reduce the quantity of acid secreted. Because the excessive acidity quickly inhibits the action of the ptyalin, the starches should be restricted moderately at first or given in dextrinated form, as zwieback or toast. The following plan may be adopted in most cases with success: For a man weighing 160 pounds, during the first week or ten days one-third pound of rare steak, well cooked, veal, mutton, lamb, chicken or turkey; sixty grams of toast or zwieback, a glass of milk and cream, equal parts, an ounce of butter, and, if desired, a soft egg or a hard-boiled egg grated for each of the three meals a day. If constipation is present, stewed apples, prunes or figs may be added to the diet. As a rule, little discomfort, aside from a slight fullness, is experienced. A powder of calcined magnesia and sodium bicarbonate, equal parts, 5ss, may be given after meals, at the time discomfort appears. A gain of two and three pounds will usually be recorded during the first week. The diet is then enlarged. Rice, oatmeal, well-cooked; vegetables, puree, stale bread may gradually be substituted for toast, and after four or five weeks a normal diet may be resumed. The patient should be instructed to avoid certain named articles, and at the first intimation of an attack the restricted diet should be resumed for a few days.

Dietetics in the Treatment of Diabetes.

A. C. Croftan limited his discussion to a disquisition on the modern mathematical ideas underlying the dietetic treatment of diabetes, and called attention to the fact that in the light of our latter day knowledge of metabolism it is possible to regulate the diet of diabetic cases with absolute accuracy. He condemned the popular fallacy of withdrawing all carbohydrates from the food in every case that presents itself with sugar in the urine. The two chief dangers of this practice are, in the first place, the utter impossibility of adequately nourishing patients with fats and meats alone; in the second place, the danger of permitting the development of diabetic acidosis, and its almost inevitable consequence, diabetic coma.

The speaker at some length explained the application of certain physical laws in regard to the heat and labor equivalents to physiological and pathological processes, and showed by simple calculation of the caloric value of the food and the caloric value of the excreted sugar, that one can determine mathematically just how much loss of proper tissue the patient suffers, and precisely which of the tissues are sacrificed.

He recommended establishing several degrees of glycosuria: One in which the patients can tolerate a certain amount of carbohydrates; a second one, in which not only the carbohydrates must be withdrawn, but a certain proportion of the food albumin must be reduced before the sugar disappears; a third and most

severe form, in which the sugar does not disappear, even when all the carbohydrates and a large proportion of the albumin are withdrawn. Based on this subdivision, the dietetic treatment must be regulated.

In conclusion, the author spoke of the factors that determine the development of acidosis and coma, and mentioned the dietetic means to prevent these accidents. He bitterly condemned the shallow practice of handing patients with diabetes printed diet sheets at random, and made a strong plea for strict individualization in the treatment of this disease.

Dietetics in the Treatment of Bright's Disease.

Arthur R. Elliott stated that the scope of this subject is so broad that no attempt was made to consider it in full detail. The speaker confined his discussion of the subject to a consideration of the most important recent advances in this field of research. The principles of protective dieting in Bright's disease include not only relief to the kidney from all superfluous work and irritation, but also the no less important consideration, caring properly for the nutritive needs of the general economy. In order to enforce rationally these principles, it is necessary to know which of the urinary solids are easily excreted, and also those which are removed with difficulty by diseased kidneys, so that we may be in a position to exclude all foods that cause the formation of end products which are inimical to the kidneys. Von Noorden's studies of the excretion of metabolic products furnished the author with information that enabled him to construct such a dietary. He found that among substances excreted with difficulty in nephritis are urea, inorganic sulphates, creatinin, urine pigments, hippuric acid, phosphates, and under certain circumstances water. On the strength of these findings he excludes, on account of urea and inorganic sulphates which they contain, all protid foods over and above the amount necessary for purposes of systemic nutrition.

On account of creatinin, meat extracts and broths; on account of urine pigments, foods containing hemoglobin; on account of phosphates, he advises that calcium carbonate be given in medicinal doses several times daily, when the patient is taking milk freely in order to arrest the phosphoric acid in the bowel, when it remains in combination with calcium. On account of the hippuric acid which they contain, he excludes certain green vegetables, cranberries, and fruits containing kernels (prunes, plums, etc.)

On account of uric acid and alloxin bodies, he excludes all glandular organs used as foods, i. e., kidneys, liver, sweetbreads, also coffee and all malt beverages. Alcohol is also forbidden, save for medicinal purposes.

Milk still remains the staple of diet in acute nephritis. The more nearly the disease approximates the acute form, the more exclusively should milk be used as the chief source of proteids. Exception is taken to exclusive milk diet in acute nephritis, owing to the poverty in iron, and the large quantity (three to four litres) necessary to furnish the nutritive cal-

ories needful for systemic purposes. It is advised, therefore, to enlarge the milk regimen by the addition of simple farinaceous foods and modify the milk by the addition of sterile cream in the proportion of one to four of milk. Of this mixture, one and one-half to one and three-quarters litres a day is allowed the patients with acute nephritis. As convalescence progresses, the diet is gradually extended. Full normal diet should not be permitted until all signs of nephritis have disappeared in the urine. Exclusive milk diet is inapplicable to the treatment of chronic nephritis, owing to the nutritive deficiencies and unfavorable influence on pulse tension.

Water in Bright's Disease—Formerly patients were urged to drink abundant quantities of water under the mistaken idea that by such means elimination of organic waste was increased. As a matter of fact, during the stage of dropsy in acute nephritis water is one of the substances excreted with difficulty by the kidneys. Great benefit may follow the restriction of fluids during this stage. This course is especially indicated if dyspnea or other evidence of cardiac embarrassment exists. As the case improves, the fluids may be increased in amount.

Treatment by Dechlorination—By controlling the amount of chlorides ingested with the food, Widal and Javal were able to demonstrate that in certain cases of parenchymatous nephritis edema and albuminuria could be markedly influenced. By excluding as far as possible all chlorides from the diet, a decided reduction of the dropsy and albuminuria was effected. They conclude that salt is for certain cases of parenchymatous nephritis a dangerous food constituent, and they propose a cure by dechlorination, i. e., the exclusion of all salt from the diet. Their results have been confirmed by subsequent observers. The writer reports two cases of parenchymatous nephritis very favorably influenced by this treatment. It is probable that in the dechlorination principle we possess a valuable adjunct to the treatment of parenchymatous nephritis.

Special Dietetic Problems in Chronic Interstitial Nephritis—Dietetics in this form of Bright's disease is much more involved than in other forms. The high arterial tension with cardiac hypertrophy almost invariably present introduces a peculiarly difficult element into the treatment of these cases. Any diet which does not take into account these cardio-vascular conditions will prove inappropriate and harmful. Regarding the choice of proteids, it is now known that the old and oft reiterated dogma of the superiority of white over red meats is incorrect. The researches of Walker, Hall and Kaufmann and Mohr prove that red meats are no more harmful than white, and are equally available to the nephritis invalid. The vegetarianism of some clinicians is to be condemned, on account of its bulk, nutritive deficiencies, and high content of water. Meats are consequently a necessary part of the diet in this disease, and it is a matter of indifference whether white or red meat is taken. We must nevertheless strictly confine the amount of

proteid food within certain fixed limits. The limit of renal capacity for nitrogen excretion in interstitial nephritis corresponds to the ingestion of about 100 grams of albumin. Within this limit the amount should be restricted. It should never be forgotten that every patient with interstitial nephritis also has heart disease, and that high tension and cardiac failure are constantly menacing elements. Consequently the simple rules of cardiac hygiene, of which moderate-sized meals and limitation of fluids are amongst the most important, must be enforced. Provided the amount of fluid be not reduced below 1,500 c.c., organic elimination, via the kidneys is not interfered with. In the presence of stenocardia it may become necessary to abandon the habitual dietary, and temporarily substitute one specially designed for lower arterial tension. Restriction of fluids to the lowest limit compatible with comfort, and a diet of bread, fruit and nuts may accomplish this within a few days.

Meeting of January 27, 1904, the following papers were read and discussed:

Treatment of Burns and Scalds.

By Charles MacLellan, M. D.

Interest in the treatment of burns and scalds has been stimulated by the recent lamentable disaster in this city. One is astonished in studying the authors from the dawn of medical literature to the present time—at the fidelity with which each has described the orthodox, unchangeable methods of treatment. It does not seem to have entered the minds of observers and writers that the subject ever needed reopening or further consideration and so the stereotyped practice has been preserved to our day.

It might be supposed, that surgeons dealing with similar injuries to domestic animals, would go further afield for remedies and methods; but so far as I have been able to peruse the literature of veterinary practice, it presents a transcript of human surgery.

The subject seems to have closed its career of investigation and curbed its curiosity, almost from the day of its nativity and should the mummy of Rameses II awake to reanimation, he would find, that in the treatment of burns, the world had slept with him, during the long intervening centuries.

This is the more remarkable as in almost every other line of science, but particularly in surgery, such wonderful activity in research has been displayed and such high achievements recorded.

The injuries are accompanied by shock, or even fatal syncope, and the reaction by inflammatory symptoms in the lungs and small intestines.

Classification I: The degrees described by Dupuytren are:

1. When the cuticle is merely scorched.
2. When it is raised in blisters.
3. When the cutis vera is more or less destroyed.
4. When the injury extends through the true skin and reaches the subcutaneous tissue.
5. When the muscles and fasciae are destroyed.

6. When the whole thickness of the part is involved.

They are frequently found to exist together.

The indications of gastric irritation, are thought to be due to ulcers of the duodenum, from excessive action of Brunner's glands to compensate the lost functions of the skin.

The clothing should be removed by cutting with sharp scissors—never by pulling or tearing. The washing done, if necessary, by affusion of rain or distilled warm water, in which a large quantity of soda bicarb. has been dissolved. The blisters should be opened and the evacuated contents absorbed by soft cotton or sponge. As a blistered cuticle never reunites with the cutis, and is not pervious to serum, it seems to me that it should be removed at once and not left to rest on the inflamed cutis, after the fluid is discharged; for it must exercise a deleterious influence on the abraded surface, even to endangering the life of the sufferer. The means of supplying fresh cuticle is vested in the cutis and is instantly begun, the moment the injury has been received. The pain, in extensive burns, is less than is generally supposed—not at all so acute as in injuries of equal extent, from other causes and frequently gives little warning to the surgeon, in cases where the life is in danger.

The surgeon should be careful of albuminuria, pneumonia, meningitis or intestinal ulcers; but as I wish principally to refer to the local treatment, I will not delay with these points.

Death usually results if one-half—some say one-third—if the body be so burned, or scalded, as to destroy the skin, or arrest its functions, on account of the impression made on the widely distributed cutaneous nerves.

The usual local remedies are, equal parts of linseed oil and lime water, olive oil, lard oil, dry cotton, glycerine, carbolic acid in solution, starch, gumtragacanth, collodion, etc. These are to my mind too adhesive in their nature. All detached dead matter should be removed with the dressings once daily, and the old injunction, to change the dressing as seldom as possible, may be disregarded. I have in my own practice dismissed all dressings except castor oil in the treatment of scalds and burns of whatever class.

I know that the orthodox advice is, that dressings when once applied, should be removed only when the discharge renders it absolutely necessary, but this course gives rise to the most frightful disfigurement and distortion.

The other equally insistent advice is, that blisters should be punctured, but on no account detached or removed. To cover burnt surfaces with flour or starch, means that when they are moist, they cake and harden and when the surgeon undertakes to remove the dressing, his patient finds the process both painful and vexatious. It is also very detrimental to healing and repair and very certain to produce unsightly scars, when healing is complete.

In the use of castor oil I have been greatly pleased with the results, as compared with the former use of the time honored caron oil, powder or varnishes.

It requires a high temperature to keep the parts free from pain, and cotton wool should

thickly cover all dressings, at least early in the treatment.

The manner of applying the dressings of castor oil is first have the parts washed as well as may be. The oil is then poured over the injured surface freely, and distributed evenly, with a fine varnish brush—say of an inch and one-half width. Pieces of plain or medicated gauze cut into the desired shape and having previously been placed in a bath of castor oil, are applied over the wound and brushed to smoothness; more oil may then be brushed in to thoroughly saturate and the gauze then covered with cotton wool deeply.

The nurse should be instructed to remove the wool at intervals sufficiently close, to prevent drying or adhesion and, having the oil in a vessel at hand, dip the brush into it and paint over the gauze to full saturation, replacing the wool. This removal of the wool and the brushing will require to be done much more frequently in the early days of the treatment, when the heat of the inflamed parts is so great, then when the case has advanced. The patient feels much comfort from the gentle friction of the soft brush loaded with oil and the daily removal of the hot, soiled dressings—rendered easy by the careful renewing of the oil. The frequent change of dressing removes the odors and gives the patient a sense of cleanliness. The castor oil applied in any quantity does not irritate the eyes, nose, mouth or other orifice of the body; nor have I noticed disgust when the mask or brush, loaded with oil has been applied to these parts. Under the use of castor oil contractions are scarcely possible and even extensive burns on face and hands rarely show disfigurement.

Inquiry shows that in the drug trade the sale of linseed oil and oils other than castor oil were in high demand at the time of the late accident which shows our practice to be strictly orthodox in this city.

When the gauze is removed and healing advanced an ointment of equal parts of zinc, oxide and vaseline may be used to keep the parts soft.

Factors That Influence Pneumonia.

By W. K. Jaques, M. D., 4316 Greenwood Ave.

Notwithstanding progress in medical science, mortality from pneumonia is increasing and its treatment is unsatisfactory. A review of some of the factors that influence the disease may not aid in establishing any definite course of treatment but it may assist in understanding why more progress has not been made.

Fifteen years ago the medical profession was undecided as to the causative germ in diphtheria. The name had been applied by the Greeks because of the leathery nature of the membrane exfoliated. Professor Koch had just made his brilliant demonstration of the presence of the tubercular bacillus in all forms of tuberculosis and it was generally believed that a single germ would be found as the cause of membrane in throat inflammations. Further observation proved that membrane is the result of the repelling of germ invasion and any one

of several organisms may be the agent exciting the reaction.

There is a similar bacterial relation in the inflammations of another portion of the respiratory tract. For almost a century pneumonia has meant lung inflammation and consolidation. Let any portion of the lung tissue lose its resistance and it is subject to invasion by any one or more of the organisms always present.

In the permeable and dilatable tissue of the lungs inflammatory reaction, due to the attempt to wall off the invasion, results in consolidation and gives the signs and symptoms which have long been understood to characterize pneumonia.

It is the custom to speak of the last factor that sets in motion the disease process as the "cause." In this sense the loss of immunity may often be considered the cause of pneumonia. This loss of immunity may be due to traumatism, exposure, old age, alcoholism, inhalation of poisonous gases and other factors not germicidal. A germ may be considered the cause when it possesses a virulence sufficient to overcome the average immunity.

It would be conducive to a better understanding of lung inflammations if there was a more comprehensive classification. The use of a word indicating the most important exciting cause might serve the purpose, such as pneumococcic, tubercular, alcoholic, traumatic, typhoid and la grippe-pneumonia, each describing the differing varieties of this disease.

While bacteria may or may not be the exciting cause of pneumonia, they are almost always important factors in influencing its course. Few individuals, including physicians, appreciate that the largest amount of life around them is represented by bacteria; that bacteria are living cells, essentially the same as those in the human tissues. Both have in common absorption, excretion, and reproduction. Both are alike subject to the laws of environment. These minute living cells are transmitted from place to place by every moving agent and wherever suitable conditions are found, they multiply. Bacteria are present in enormous numbers in dust, water and all kinds of food. They swarm over the surface of almost everything living or dead. Every breath or movement of the human body brings it in contact with myriads of bacteria. A teaspoonful of milk taken directly from a healthy cow will contain on an average fifty thousand bacteria. The human body is composed of rich bacterial food and its very existence depends on its ability to repel or destroy the bacteria with which it comes in contact. Germ destruction is not something that is called into activity when there is infection, but it is a requisite to health.

When certain bacteria are destroyed in the human body, they are dissolved, their toxins are set free, enter the circulation and are carried to the cells. A resisting metabolism results. In this manner immunity against these bacteria is maintained. On the other hand, when bacteria invade the human body and are not destroyed, the opposing cell products of the human cells cause a corresponding resisting metabolism in the bacterial cells and an immunity is established against the destructive products of the human cells. Protected by this immunity,

these bacteria can invade and rapidly multiply when carried to other human beings. The most dangerous bacteria are those whose immunity against human cells has been secured by a residence in human tissues for generations.

The bacilli of pneumonia and influenza do not produce any lasting immunity either by a residence in the mouth or by an invasion. They are easily destroyed by sunlight and almost disappear from healthy throats during the summer. In cold weather the infection is carried from individual to individual until a large per cent of the community come in contact with it. Multiplication and injury result according to susceptibility.

The tendency of the pneumococcus to multiply with great rapidity and to increase its virulence makes it especially dangerous when invading the lungs. The absence of the pneumococcus and the germ of influenza during summer prevents the immunizing action due to their destruction by the human organism. In winter, the changeable weather conditions, the strenuous city life, together with confinement in over-heated and ill-ventilated rooms induces an impaired vitality which finds expression in a high pneumonia mortality.

The similarity between diphtheria and pneumonia has been alluded to. Both attack a portion of the respiratory tract. Both are localized and secrete a constitutional toxin. The class of individuals attacked differs materially. Diphtheria occurs most frequently in early life when metabolism is active, the heart, lungs, kidneys and other vital organs are sound. Pneumonia comes most often where the reverse is the rule. The triumphs of medical science in other diseases contribute to increase this class of aged individuals. The child that recovers from diphtheria, the youth that is rescued from consumption or typhoid fever, are passed along to be the victims of the diseases of old age. There are numbers of individuals in every community who have passed the meridian of life in seeming fair health but who have weak hearts, crippled kidneys, cirrhotic livers or sclerotic blood vessels. These impaired organs are able to perform the functions required in careful living, but have no reserve power. A cold, exposure, or a seeming trivial over-indulgence and the respiratory tract is invaded. In such an individual it makes but little difference what bacteria produce the invasion. A fatal result is quickly brought about by the failure of the crippled organs.

The first defense of the respiratory tract against the invasion of germs is the germicidal action of the epithelial cells of the mucous membrane. The upper portion of the tract is constantly subject to infection by germ-laden dust. For this reason the germicidal power of the cells and the mucus they secrete is considerable. It is not sufficient to prevent some germs from maintaining a residence in the mouth. These are the germs that invade the tissues when there is a loss of immunity in the epithelial cells. This may happen from both external and internal causes. Chilling the air-passages by running to catch a train on a cold day; breathing irritating vapors, hot air or smoke, all may break down the immunity of

the mucous membrane. There are other causes such as loss of sleep, exhaustion, worry, retention of excrementitious material, or excesses of any kind may bring about the impaired vitality that permits an invasion of the pulmonary tract. Lung tissue is almost devoid of the nerves of sensation and infection may spread over considerable area before producing marked constitutional disturbance.

Reaction from toxin is the attempt of the organism to limit and repel invasion. The vascular and distensible character of the pulmonary tissue permits the deposit of a great amount of material in this attempt to wall off invasion. The permeable vessels allow the leucocytes and erythrocytes to pass into the alveolar spaces so that enormous numbers of these are retained in solidified pneumonic area. This area not only represents a large amount of blood withdrawn from the circulation but includes the sacrifice of millions of the phagocytes, the warrior cells which are the chief agents in destroying bacteria. The regenerative powers of the patient must respond quickly to replace these. Here is the fatal defect in the fight of the aged in pneumonia. The regeneration of cells becomes slower and slower in advancing years. The shriveled skin, the shrunken muscles and lessened metabolism indicate that cell death has become more rapid than cell regeneration. Inhibitory products to restrain the invading bacteria, antitoxins to neutralize the toxins are not rapidly produced by the feeble cells. The phagocytes that are sent into the blood have little strength to battle with the vigorous invaders.

The power of the blood to destroy bacteria is greatly increased by the death of the corpuscles. When the inflammatory products are poured into the affected area, bacteria are present in all portions of it. If the deposit has the power to destroy these, the chances of resolution and recovery are increased. But if this does not happen, the whole inflamed area becomes an inoculated culture which makes a grave prognosis for the patient.

The toxins and poisons elaborated during the progress of pneumonia depend on many factors besides the virulence of the germ at its invasion, although this is an important factor in precipitating a fatal result. The virulence of the germ after its invasion depends on the soil, or environment, furnished by the patient. This environment is influenced by the metabolism of the body in its elaboration of inhibitory products, the presence or absence of excrementitious material, and other factors which influence the virulence of the germ and modify its effects on the vital centers of the patient.

When a physician is first called to a case of pneumonia, he comes to a battle already in progress. The bacterial cells have found the rich stores of food unguarded and are forcing their way into the tissues as fast as possible. The human cells are aroused in opposition. While the brunt of the battle is in the lungs, every cell throughout the entire organism is affected and may influence the result. The salvation of the patient depends upon the favorable metabolism of the cells. The value of the physician's services depends upon his knowledge

of the functions of the various organs and the means at his command to favorably influence them.

The first examination of a case of pneumonia should be sufficiently thorough to give the physician a good estimate of the resources of the patient. In addition to the usual information asked concerning predisposing causes, age, temperature, extent of lung area involved, etc., a culture should be taken and a smear made for microscopical examination. A blood examination should also be made. The condition of the heart, blood vessels, kidneys and liver noted. The treatment must necessarily be influenced by the knowledge obtained from the examination. Every preparation within the means of the patient should be provided.

If the microscope reveals the presence of the diplococcus lanceolatus in sufficient numbers to indicate that it is the chief bacterial factor in the inflammation, the prompt administration of pneumococcus antitoxin is a rational procedure. This should be done with the appreciation of the minor part that the pneumotoxin may play in the disease.

If the patient is a vigorous robust man with sound heart and kidneys, the greatest danger will be from pulmonic engorgement and suffocation. A line of treatment such as was successful in this class of cases in the hands of Dr. N. S. Davis among the New England hills a generation ago has never been improved upon. If the patient was seen at the beginning of the stage of engorgement, a vein was opened and a pint or more of blood taken. This relieved the congestion and was, as a rule, followed by cessation of the pneumonic extension, resolution and recovery, with little or no other medication. It is now rare that a patient comes into the hands of a physician who can permit this loss of blood and still retain sufficient vitality to insure recovery. In a large portion of the cases a supportive treatment is demanded.

The many factors contributing to the pneumonic condition require a wide variation of treatment. In one patient a weak heart is the most serious problem; in another poor nutrition; in another nephritis gives concern. The pulmonic area may demand a line of treatment in one class of cases which would hasten fatal results in another. Therefore the judgment of the physician must decide what measures and remedies are best suited to the individual cases. There are some cardinal points in the management of pneumonia on which the physician should have a carefully matured line of action. They are, control of temperature, an adequate supply of oxygen, the proper administration of nourishment and attention to eliminations.

In the control of temperature, the study of bacteria in the laboratory gives a valuable hint. Most pathogenic bacteria, and the pneumococcus in particular, increase in virulence and the power of multiplication with the increase of temperature. Clinical observation seems to bear out the theory that the human cells resist and oppose bacteria and their toxins best when near the normal temperature.

The best means I have found for the control of temperature is the chest jacket between the

layers of which are continuous coils of rubber tubing. Through this, ice water is kept flowing from a bucket above the patient into a like receptacle beside the bed. When the upper vessel is empty, the buckets may be reversed. Ice should be added to the upper vessel as needed to control the temperature. One advantage of this method is that the patient is not disturbed during its administration.

One of the most important factors in favorably influencing the course of pneumonia is the presence of plenty of free oxygen.

The tissue cell and bacterial activity result in the breaking up of many molecules. The atoms thus set free enter at once into other combinations. With free oxygen present, many toxins are oxydized and harmless products are formed. The difference in the composition of cholin and neurin is but a single atom of oxygen. One is harmless and the other is intensely toxic to the human cells. A liberal supply of fresh air should be provided. This should be warm, more for the protection of the attendants than for the benefit of the patient. When this cannot readily be obtained without preventing draughts, tack cheese cloth over the window screen and ventilate the room in this way.

It is a law all through the cell world that a cell's own excreta is poisonous. There is a rapid accumulation of waste products in the pneumonic condition and the presence of a sufficient amount of water is essential. From the beginning fluids should be systematically given and eliminations stimulated. The oral administration of water is often difficult. The mouth is parched and the lips and teeth covered with sordes. The stomach is the depository of the tenacious, gluey expectoration from the lungs and is illy prepared to receive water or nourishment. The judicious use of normal salt solution per rectum, or through the skin, will aid in keeping the tissues supplied with fluids.

In the giving of nourishment, the condition of the assimilative powers of the patient should be considered. It is not what is put into the stomach but what is assimilated. To pour quantities of eggs, milk and whiskey into a paralyzed stomach half filled with pneumonic sputum is of very questionable value. If, with this, there is added the usual remedies given in pneumonia such as ammonium muriate, opium, quinine, digitalis, etc., it is beyond the powers of man to formulate the result.

Medication has not achieved any great victories in pneumonia. This may be due, in part, to the uncertainty of oral administration. The proper administration of remedies should not be discouraged but they should be given with a clear understanding that the life of the patient depends on the resisting metabolism of his cells and that medicines are only given to increase this. Medicine cannot wipe out the penalty of physiological sins; neither can it restore youth to the aged cell, but this should not deter a doctor from putting forth his best efforts.

The class most susceptible to pneumonia are the aged and those with impaired vitality. How can they be protected? As the present methods of caring for pneumonia by some physicians, health officers and those immediately concerned,

insure the thorough distribution of pneumonic infection, the only course left is to advise susceptible people to leave the pneumonia belt during the months when it is most prevalent. This belt, as pointed out by Dr. N. S. Davis, comprises that part of the temperate zone which is subject to the extremes of temperature: Those who have the means can add years to their lives by spending the pneumonia months outside of this territory.

For recapitulation and emphasis I repeat, that human and bacterial cells are essentially alike; that both are subject to the same law of environment; that when human cells destroy hostile bacterial cells, it results in greater power in the human cell to destroy bacteria of its kind; that the same law holds good with the bacterial cells. Thus disease-producing bacteria, when transmitted from one patient to another, possess an immunity which is likely to overcome the protection of the average individual. The most important rule in the care of all infectious diseases is the destruction of the infection as near its source (the patient) as possible.

In the past, the contagiousness of a disease has been measured by the time of its contraction after exposure. But there is no definite period of incubation in germ diseases of the respiratory tract. This is due to the fact that when these germs are thrown off, they are carried away in mucus which dries and forms a protecting coat. In this condition the dried and powdered mucus may be carried long distances without loss of virulence. Many cases of pneumonia are in persons with a pre-existing tubercular lesion and these discharges are doubly dangerous.

The method of destroying infection in discharges from the lungs should be carefully considered. Heat is the safest. Burn or boil as many of the infected articles as possible. Furniture which cannot be treated in this way should be thoroughly cleansed with soap and water and then disinfected with formaldehyde. It should be remembered, in the use of this gas, that dried pneumonia sputum, and the horny resisting tubercular bacilli, can be but little affected by it in the way it is usually employed for disinfection. Cleanliness is the first and best half of disinfection. Burn, boil and scrub. Lastly disinfect.

Discussion on the Paper of Dr. Jaques.

Edward F. Wells: Mr. President.—I have but little to say, however, I do not desire that this Society should allow such a valuable paper to pass without any discussion whatever. Certainly, the paper has been broad, well put, and many points of great importance have been considered.

I believe that the reason for bleeding in pneumonia is not clearly understood by many physicians. For instance, in the beginning of pneumonia the infected pulmonary area is congested; the lungs as a whole may be somewhat congested also, but the infected area is the part which is mainly congested. It is clear that upon physiological grounds the abstraction of one pint or more of blood can have

but little effect on that congested area. The cause of the congestion still remaining, the ordinary effects of that irritant must continue. However, the very fact that, the disease, from the very beginning of the pneumococcus infection of the lungs, and at a time when there can be but little toxin formed, produces such a profound impression upon the system as to cause a chill which is more severe than any other chill except that of malaria and septicemia; that within a short time raging fever follows, and the patient is completely prostrated, is evidence that the toxin of pneumonia is of the most virulent class. As time goes on, and the amount of toxin produced is necessarily increased, the cells of the system accommodate themselves to the toxin; so that it is not true that the greater the amount of toxin, the greater the effect, comparatively. That is, an amount of pneumotoxin, which is infinitesimal in amount and diluted beyond all computation, produces these remarkable early effects. If, at that time, blood be abstracted to the extent of one pint or a pint and a half, the amount of blood in the body is reduced by probably one-fifteenth or one-twelfth, and if this is replaced by other fluid which is not already contaminated, there must follow a prompt dilution of the toxin. This I conceive to be the reason; the best and only reason, why bleeding should be performed in early pneumonia.

The times when bleeding is of the greatest benefit in pneumonia theoretically and by experience is, as stated by Dr. Jaques, in the early, or in the late stage of pneumonia. There occurs a time late in pneumonia when a period of extreme danger is at hand; when it is questionable whether the patient can survive a few hours or not. If he can be tided over this period he may be saved. Under these circumstances bleeding for the same reason as above mentioned and to the same extent is useful and necessary in many of such desperate cases.

The effect of the leucocytes upon the pneumotoxin is worthy of careful consideration. I have in several cases obtained specimens of the blood within an hour of the chill of pneumonia; in one case within twenty minutes. A man was taken with a pneumonic chill in my presence, and in this case, in which blood was obtained within half an hour of the chill, the leucocytes were already very largely increased in number in the peripheral circulation, and they increased from the start. This increase as is well known is in one kind of cells (polynuclear) ranging above ninety per cent in each of the cases.

I have in my possession some sections which show the following phenomenon: In a case of leukemia with pneumonia sections of organs other than the lungs, show a large excess of lymphocytes in the blood vessels; the leucocytes in the capillaries of the lung show a large excess of mononuclear cells. There is some cogent reason for this, and it is probable that these polynuclear leucocytes, motile glands, as they may be called, have the property of secreting a something that is opposed to the toxin of pneumonia. Of course,

this is all old ground, but it can not be mentioned too often.

As to the causation of the disease, I believe it is the frequent experience of most physicians that many cases of pneumonia have their origin in attacks similar to this: A man has been exposed to a severe cold for several hours, possibly after considerable physical exertion; he goes home in the evening tired, exhausted, lies down, goes to sleep, and awakens with a pneumonic chill. The extreme exhaustion, reducing the excitability of the reflex nerves probably has something to do with allowing the pneumococcus, which has found its way into the upper air passages, to gravitate into the alveoli and there do its unfortunate work.

The administration of morphia or opium in pneumonia is a subject of considerable importance, and I believe that it requires an expert therapist to give opium in a proper manner in pneumonia. I think that when morphia is used, the dosage is usually too large. It is remarkable how minute doses, e. g. 1/16 gr. or 1/12 gr. of morphia will be helpful in the early stages of pneumonia. I speak advisedly as to the quantity that can be given beneficially to these patients hypodermically; yet its effect is remarkable, in that the drug has that quieting, soothing influence which these patients require. Toward the end of the disease, when the patient is restless, with an irritating cough, and with probably profuse perspiration, equally small doses of morphia act as a stimulant and are extremely useful.

Charles Spencer Williamson: There is one point in the paper of Dr. Jaques to which I desire to call attention. I refer to the use of saline infusions. Several years ago Paessler, of Leipzig, made some researches in regard to the therapeutic value of various procedures in pneumococcus infections, for the accuracy and scientific value of which I can vouch. One result of these researches was to show that the so-called heart failure of pneumonia is, in a majority of cases, neither more nor less than a vasomotor failure, due probably to toxæmia of the vasomotor centers. His work in regard to pneumococcus infection was experimental, and from it the conclusion may be drawn that all efforts should be directed primarily towards combating vasomotor failure, which is the real cause of death in most cases. From the work of Paessler and his collaborators it would seem that we should pay more attention to the vasomotor system throughout the treatment of this disease. The effect upon the vasomotor system of injections of saline solutions per rectum or of subcutaneous or intravenous infusions is well known. The question in most cases is not one of reduction of the vasomotor tension, but of an increase of it, and in some cases, saline infusion administered either subcutaneously or intravenously increases vasomotor tone, and tides the patient over the crisis or over the time at which heart failure seems imminent. The suggestion is undoubtedly valuable if adequately carried out and especially if they be employed before the toxæmia has become so great as to

hopelessly impair the vasomotor center. His experiments have shown clearly the worthlessness of some of the so-called heart stimulants on which the profession is accustomed to rely. His work is so solid a contribution that it deserves to be read by all those who treat cases of pneumonia.

Arthur Dean Bevan: It is probably out of place for a surgeon to say anything in regard to pneumonia. I want, however, to compliment Dr. Jaques on his excellent paper, because as I interpret it, it places the subject in about this position: When a patient has pneumonia, if he gets well, he gets well on account of his own resisting power. If he dies, he dies because he lacks sufficient resisting power. If he gets well, he has not to thank the Doctor's medicines for it. I think that is the conclusion, if I have interpreted the paper correctly, and I believe this is a conclusion that should be more generally admitted by the medical profession. I think it would be a great step forward if the medical profession of the entire country would admit, as they must I think, if they analyze the facts carefully, that medical treatment in pneumonia is absolutely valueless as far as effecting the mortality is concerned; that it is time wasted to discuss whether this or that of the present day methods is of the greater value. If one reads the report of the Boston City Hospital, compiled within the last year, of the pneumonia cases treated there for fifty years by a number of different methods, each method showing about the same results, he is forced to the conclusion that there has been discovered so far no method of treating this disease that modifies favorably its outcome, and I think it will be a great step forward when this is admitted by the profession throughout the entire world. If we admit this, then we can say at once, let us seek some method of treatment that is of value. It would be a great step forward if the public was taught as it already has been taught in regard to the medical treatment of typhoid fever, that the treatment of pneumonia is in our present state of knowledge simply that of proper care. I think the public generally understands that there is no such thing as the medical cure of typhoid fever, and I think it would be a step forward if it understood the same was true of pneumonia. I believe we would be more likely to obtain the necessary assistance to solve this problem if the entire profession accepted this position and worked together with the view of obtaining some means of controlling the disease favorably.

Surgeons are known to be therapeutic nihilists, but I know this, that when we, as surgeons, find a surgical pneumococcus infection, and the pneumococcus produces many other lesions outside of a typical pneumonia, we recognize that medical treatment in such a case is absolutely of no avail, if we can get a drainage tube into a pneumococcus abscess we may accomplish something. We let out the pus. But so far as influencing in any way the outcome of the germ infection by the internal administration of drugs, surgeons would unanimously

say that they know of no means which will influence a pneumococcus infection.

Clarence MacLellan: It rather gives one the feeling of being placed in a refrigerator to hear the remarks of Dr. Bevan as to the hopelessness of our present position in the treatment of pneumonia and of typhoid fever. I regard the presence of the physician in cases of pneumonia and of other diseases as of a great deal more value than it is in the case of rheumatism, when he is supposed to do some good. The physician can instruct the nurse what to do at the time of the approaching crisis, etc. I feel that this remark of Dr. Bevan's should not go unchallenged. Of course we cannot do as much as we wish; we can do very little, perhaps, but we can remain in a state of receptivity, and when the surgeon has nothing better to offer us, I do not think he should demolish what little hope of progress we may have in the treatment of this disease. I believe the physician is of essential benefit in a case of pneumonia or any other case requiring intelligent care and treatment, and while we as physicians are willing to acknowledge that we do less than we might, we are in a state of receptivity as to facts, and are better able to cope with the disease after hearing what has been said.

Edward F. Wells: I wish to occupy a few minutes' more time on this subject in presenting a matter which was not intended for this audience. However, it is germane to this subject, and it is this: Ever since Redtenbacher discovered that in ordinary cases of pneumonia the chlorides in the urine were diminished or absent, the matter has been considered of considerable importance. Somehow or other, by common consent, there has gravitated into our text books and the literature of pneumonia the statement that the chlorides are absent or greatly diminished in practically all cases of pneumonia. Considerable experience in urinary analyses in cases of pneumonia has convinced me that this is only partially true, and the most severe cases of pneumonia may run their entire course with the ordinary amount or even an increase of chlorides. I have seen this in so many cases, that I am prepared to vouch for the truth of it.

Here are some records of a case that is yet under observation and has been under observation for the past ten days. The patient was referred to me by Dr. Turck. On the second day of the attack a single specimen of urine, passed in the afternoon, showed alkaline reaction to litmus paper, but an acidity of 35 by the phenolphthalein test; specific gravity, 1020; 1.4 per cent urea; 25 per cent chlorides (by Purdy's method); 50 per cent phosphates; 1 per cent sulphates, and indican in excess to the extent of requiring six drops of five per cent solution of chlorate of potash for its discoloration. No casts. Examinations were made daily to the present time. The average excretion of urine during these ten days was 1550 c.c., which was on the average quite red in appearance. All the specimens except the first were acid in re-action to litmus paper, and the average required 64 c.c. of decinormal

sodium hydrate solution to neutralize. The average specific gravity was 1018; average excretion of solids, 64 grams per day; average output of urea was 1.7 per cent., amounting to 20 grams per day; chlorides ranged between 10 and 35 per cent., with an average excretion of 26 per cent; phosphates ranged between 8 and 25 per cent, with an average excretion of 16 per cent; solids ranged between 2 and 6 per cent., with an average excretion of 2.6 per cent. The indican rapidly declined after the first few days to mere traces, and has been absent for several days. That is probably due to the diet. On the fourth, fifth and sixth days granular and hyaline casts were present, and on these days albumin was present, varying from a trace to eight per cent. I take it, that the excretion of chlorides and salts in these cases of pneumonia is well worthy of careful consideration along the lines Dr. Jaques' remarks in the resisting power of the human cells and of the virility of the pneumococcus.

Dr. Jaques (closing the discussion): I think it is unfortunate for a surgeon to blunder into a discussion on pneumonia in the manner which my friend did to-night. It is true, that pneumonia is largely a disease of impaired vitality; that the mortality is produced largely from impaired vitality and old age, but I do not care how old a person is, or how hopeless the case is, I think it is the duty of every physician to go to that patient with the firm conviction that he is of some value in placing the patient under the best possible conditions to make a fight for his life. I believe that every physician has the means within his power, if he has been properly educated, to influence the course of pneumonia, and that when a physician goes to a patient feeling that nothing can be done for him, God help the patient, for he cannot.

Dr. D. N. Eisendrath read a paper on **Some Methods in the Treatment of Cardiac Failure**, has not been received. The discussion follows:

Dr. Parker: In regard to the method that Dr. Eisendrath has brought to our notice, namely, rapid manipulations over the heart, as he has shown us, I have had some experience with it. I have tried it in two cases where there was extreme shock, and in both I have been very much pleased with the results that have been accomplished. The results, as Dr. Eisendrath has stated, are immediate. With all other manipulations I have been acquainted with in these cases, we have had to wait for a time; that is, we had to do a good deal of work, then stop, then go on again, keeping on working for a considerable time before receiving very much encouragement. But with the method he has demonstrated, the results have been immediate in both of my cases.

I am not able to report so favorably with regard to the use of adrenalin; in fact, I have been very much disappointed with the action of adrenalin, not only in surgical work, but in some medical cases. I have used it more than fifty times in the last year, and have been much disappointed in its action. I would like to hear from other members of the

Society as to their experience with reference to adrenalin. I have given it in drop doses, and five drop doses. Adrenalin takes effect quickly, but it is too fleeting in its action. After giving a drop or two of adrenalin, if you will sit by the patient and hold the pulse, you will find that in five or ten minutes the pulse will begin to quicken; there will be improved tone; the patient will look better, and you will be very much encouraged. But in five or ten minutes more it will flutter, and the pendulum will swing back, and the pulse will be worse than it was when you began, and soon it will go back where it was, and inside of twenty minutes the effect of the adrenalin will have disappeared. If adrenalin could be administered constantly, a few drops at a time, in hospital practice it might be of value. But aside from what I have said, we have been taught wrongfully in regard to the use of adrenalin, and I do not believe it is the heart stimulant that we have been taught.

Dr. O. T. Roberg read a paper on **Sialolithiasis**, which has not been received. The discussion follows:

John Kercher: Owing to the rarity of this disease, as the essayist has stated, I thought I would report a case that came under my personal observation. I have also brought along the specimen. The patient was a German Jew, aged 35 years, traveler by occupation. On August 5, 1903, he consulted me at my office, complaining of pain and swelling under the tongue, more marked on the left side; also inability to open his mouth. He had noticed for one and a half years that a hard substance, the size of a small pea, had formed under the mucous membrane a little to the left of the frenum on the floor of the mouth. He noticed this especially whenever he partook of any tart or acrid substance, as vinegar, and also noticed some redness of temporary duration, and what he called "a swelling of the vein."

Examination showed the floor of the mouth to be swollen considerably, but especially marked on the left side. Ability to open the jaw, to masticate and speak very much restricted. Complained of restlessness, pain and some fever. I passed the middle finger of my right hand under the jaw and made pressure upward, thus elevating the floor of the mouth, then passed the forefinger of the left hand into the mouth, and was able to palpate the mass. I found indications of pus, and made an incision, which was followed by oozing of liquid pus. I then prescribed an antiseptic mouth wash. He returned August 7th, two days after the former visit. He complained of restlessness, fever, pain, inability to eat, and weakness. He also stated that there had been a discharge of pus. I enlarged the incision and attempted to probe, but had to desist on account of the pain. The swelling was now even with the articulating surface of the lower incisors. I evacuated a considerable quantity of the pus, and on account of the great pain and restlessness of the patient I prescribed an opiate and sent him home. On arriving home, the opiate affected him so that he went to sleep. The patient claimed that he had not

slept for about a week before. He slept between one and two hours, when he awoke with a coughing fit, and great pain, especially where the incision had been made, and suddenly felt a hard substance emerging from the left side under the tongue. He spat it out with a quantity of pus and blood. He made a quick recovery after this, with the exception that the swelling in the floor of the mouth was still present some weeks thereafter, and it was more than a month before it returned to its normal condition. The highest temperature was 100° F., which lasted two days.

The calculus is one inch long, three-sixteenths of an inch thick, weighs exactly ten grains, and is banana-shaped. The calculus came from the left Wharton's duct.

D. W. Graham: Dr. Roberg is to be congratulated on the excellent paper he has given us. It shows a great deal of study of the literature, and some original investigations and deductions which are to be commended. I think the doctor's case almost proves his theory that a foreign body is one of the factors in the production of salivary calculus. That is of some importance from a clinical standpoint.

The paper contains more chemistry than most of us can get away with, considering the rapidity with which he read it. However, I believe it will read very intelligently, but the doctor ran over the formulae too fast for the average man to digest them during the reading.

In regard to diagnosis, the trouble is more likely to be mistaken for malignant disease than any other especially when the gland itself contains a stone. It is chronic when seen by the surgeon. The infiltration of the gland of the surrounding tissues, together with the induration, is suggestive, superficially at least, of malignant disease. In one case I mistook the condition for malignancy, extirpated the gland on that theory, and found a stone. It is important clinically to distinguish salivary calculus from malignancy, and although salivary calculus is rare, malignant disease of these organs is very much rarer.

Arthur Dean Bevan: My attention had not been called to the importance of salivary stone until rather recently. The first case I saw was within the last five or six years, and since that time I have seen the condition under at least five different aspects. One of my most intimate friends has a large salivary stone in the submaxillary duct, which has never given rise to any symptoms. I have tried often to persuade him to have it taken out, because I wanted the specimen. The stone is movable and apparently harmless.

The second condition in which I have seen this trouble is one where there is a discharge of pus from the duct, leading one to think almost of a catarrhal condition of the entire duct without marked obstructive symptoms.

A third condition has been described by Dr. Roberg as salivary colic, in which, when the patient eats a meal, there is sudden pain, and blocking up of the saliva by the calculus; distending the gland, and this gradually decreased after the meal. It may recur for a considerable

ing to the exit from the spine of the fourth intercostal nerve. This pain lasted an hour and has not reappeared since. The interesting features of the case are: (1) The very atypical location of the bursa, in the left mammary region, near the origin and beneath the fibers of the pectoralis major. (2) The precordial and interscapular pains which so closely simulated attacks of angina pectoris, and which were of course due to pressure on the intercostal nerve. (3) The differential diagnosis of the case, in which perichondritis, mastitis, gumma, lipoma—intramammary and possibly cellulitis had to be considered. (4) The causative factors: The patient tells me that he is in the habit of using his mallet with his left hand, and that he frequently hits himself in the precordial region while working. He also uses a polishing instrument by pressing the handle against his precordial region while running the rasping end on the stone.

Definition: "Bursae are small closed sacs or spaces in the connective tissue, lined with a synovial membrane, lubricated with a small amount of serous fluid and situated about the articulations, underneath tendons or interposed between surfaces which move upon each other so as to cause friction." (Keating). There are normally about 150 bursae in the body, but as they are capable of forming at any point which is subjected to prolonged pressure, the number may be materially increased. Bursae mucosae may form adventitiously at points of pressure or irritation. (8).

Etiology: "Professional bursae are produced by friction of superficial tissues or organs against deeper organs, or vice versa. As long as the walls of a bursa remain thin, and there is only a small amount of lubricating fluid contained therein, congenital and adventitious bursae are, anatomically speaking, identically alike. Repeated pressure and friction causes an irritation of connective tissue elements, resulting in active proliferation. In the first stage of its evolution, an adventitious bursa is merely a small nodule of connective tissue cells. By gradual degrees, the peripheral cells of this nodule form the sac wall, while the central cells die and liquify, constituting the fluid portion. The cells forming the cell wall continue to elaborate mucin, thereby increasing the size and tension of the bursa" (Schauchardt⁹). "It is therefore evident that congenital and accidental bursae have an identical origin, because the formation of a hygroma occurs as the result of mechanical forces which are the same as those responsible for the formation of congenital bursae" (Retterer¹⁰). Adventitious bursae are very commonly found over bony prominences or beneath tendons. The "housemaids knee," "miners elbow," "porters shoulder," "shoemakers chest" and "bunion," are too well known to require further explanation. (Dunoyer, 1) first described a new professional bursa 3 cm. from the acromio clavicular articulation, on the superior surface of the clavicle. A number of these bursae were found among workers in a sugar refinery; all were caused by pressure of loaves of sugar which these men were in the habit of carrying on their

shoulders. Rizet², called attention to a bursa which develops on the dorsal aspect of the foot and which is due to pressure of shoes. Monks³, mentions a pretibial bursa occurring in a floor layer. LeFort and Albert⁴, army surgeons, gave the name of "cavalry hygroma" to a subcutaneous bursa developing over the internal condyle of the femur in cavalrymen. Pean⁵, found a bursa over the internal malleolus due to pressure of heavy shoes. This bursa is now known as "tailors ankle." Dunn⁶, describes a bursal tumor in the popliteal space, occurring in a sailor. No anatomical relations or etiology are given however. Bursae found in connection with the fleshy portion of muscles are extremely rare. Moutier⁷, found in a blacksmith a large fluctuating tumor under the fleshy portion of the left pectoralis major. This tumor had been increasing in size for over two years, without however giving rise to constitutional disturbances. It extended from a point 5 cm. from the left sternal border, to the midaxillary line, and from the lower border of the clavicle to the third interspace. The overlying skin was normal in appearance and freely movable over the tumor. The diagnosis of hygroma was made on the operating table. The direct cause of this hygroma was the repeated pressure and friction of a stout rope which the blacksmith was in the habit of using while shoeing oxen. This rope was hitched to the ox's foot, passed through a pulley in the ceiling and held taut by passing over the blacksmiths left side of the chest and around the left axilla to the lumbar region where his left hand held it in place while he worked with his right. The left side of the chest thus acted as a second pulley.

Pathology: Bursae, congenital or adventitious, are liable to undergo various pathological changes which may be acute, chronic or neoplastic. Of the former we may mention (a) bursal hematoma, following trauma or circulatory disturbances. Organization of the blood tumor may take place, resulting in a fibroma; this may later undergo calcification. (b) Acute bursitis, ordinarily due to external traumatism or excessive muscular exertion, but may be of hematogenous origin, from the presence in the blood of pus cocci, gonococci or pneumococci. (Hektoen¹¹). It is an acute hyperemia of the bursal sac, giving rise to secretions which may be serous, sero fibrinous or purulent. (Park.) Chronic bursitis or hygroma is a distinct type *per se*. It occurs as a painless, fluctuating swelling of slowly increasing size, with thickened walls and containing a thick mucoid fluid. The inner surface may be smooth or covered with dendritic papillae that may become cartilaginous or myxomatous. Free bodies, sometimes masses of cartilage the size of a chestnut, may be found in the cavity, similar to those found in the cavity of joints. The contents of the hygroma are usually thick, mucous or colloid like, at first containing much albumin and mucin; later they become thinner and more serious in character. In gout, a deposit of urates may be found in the bursal sheath. Tubercular bursitis may be primary or secondary. There is usually present a ser-

ous or sero-fibrinous exudate; sometimes the cavity becomes filled with caseous material. The presence of rice bodies is usually pathognomonic of tuberculosis. Syphilitic bursitis occurs during the secondary stage of a luetic infection. The histologic changes are identical with those of tuberculosis. (Hektoen). Tumors: Chondromas, sarcomas and fibroma's have been described. Blanc¹², had a case of hygroma in a pre-patellar bursa, in which there was a fibrous hyperplasia of the bursal wall instead of a serous hypersecretion.

Symptoms: Bursae, congenital or adventitious, in probably the majority of cases, never give rise to subjective symptoms, and patients are often unaware of their presence. The overlying integument may or may not be thickened. As long as the contents of a hygroma remains sterile, the symptoms, if any, are merely mechanical disturbances such as stiffness, tension or impaired motility of the parts involved. This fact is clearly shown in Moutier's⁷ case. His patient had a hygroma containing over a liter of clear serous fluid, and yet he was able to continue with his work. A sense of pressure in the axilla and anxiety, brought him to the surgeon. The history of nearly all reported cases is that of acute bursitis. Traumatism, excessive fatigue, cold, gonorrhoea, rheumatism, gout, syphilis and tuberculosis have all been mentioned as causing acute infection of a hygroma. Pain, local and referred, tenderness, cutaneous redness, slight elevation of temperature and pulse rate, are usually present. Motility of the neighboring joint is restricted. When suppuration has taken place, these symptoms become intensified.

Diagnosis: When situated in a locality which is frequently the seat of adventitious bursae, their recognition is not difficult. The chronicity of the tumor; the fluctuation; the absence, in general, of pain, tenderness or constitutional disturbances, make up a clinical picture of hygroma which is easy of diagnosis. In acute bursitis, the signs of inflammation may be misleading, especially if there is a history of recent traumatism. The aspirating needle will quickly settle the question of a hematoma, before discoloration of the overlying skin takes place. In tubercular bursitis, the presence of "rice bodies" is pathognomonic. Many cases will be found to be secondary to a neighboring tubercular arthritis. Syphilis must be excluded by a careful history of the case and a search for other luetic signs. Specific medication may be instituted to clear up the diagnosis. Lipoma intramuscularis is a chronic, non-inflammatory tumor found in the fleshy portion of muscles. On palpation, it has a peculiar doughy, non-fluctuating feeling. It is often diagnosed on the operating table alone.

Treatment: (a) Prophylactic. Persons whose occupation entails constant pressure against bony prominences, should wear suitable pads. (b) Palliative. Rest, cold compresses, painting the overlying integument with Tr. iodine, may arrest suppuration. With the exception of specific cases, internal therapy is a farce. (c) Operative. In all suppurative cases, prompt evacuation and drainage is indicated. The ordinary chronic, non-infected hygroma

should be considered as nature's pad and left alone unless mechanical discomfort is well marked. Aspiration, followed by injections of carbolic acid or tr. iodine and compression bandages, sometimes succeeds in obliterating the cavity. Radical excision of the bursa, or incision, curettage and packing, give the best results. In "Hallux Valgus" or "Bunion," resection of the joint is often necessary in order to obtain a cure.

References:

1. Dunoyer, Association Fr. p. l'avanc. des Sciences, 1878, p. 1017.
2. Rizet Gazette des Hopitaux, 1880, p. 947.
3. Monk, Boston Med. and Surgical Journal, 1890, p. 591.
4. LeFort and Albert, Rev. de Chirurgie, 1893, p. 569.
5. Pean, Lecons de Clin. Chirurgicale, 1885, p. 496.
6. Dunn, Lancet, 1879, p. 405.
7. Moutier, Annee Medicale. (Caen) Juin, 1879, p. 105.
8. Winslow, Maryland Med. Journal, 1889, p. 321.
9. Schauchardt, Archiv. f. Path. Anat. u. Physiol, 1890, B. CXXI, p. 305.
10. Retterer, Journal d'Anatomie, Paris, 1896, p. 256.
11. Hektoen-Riesman, Pathology, p. 744.
12. Park, System of Surgery, p. 511.
13. Blanc, Bull. Soc. Anatomique, Paris, 1898, p. 445.
- 34 Washington st.

 West Side Branch of the Chicago Medical Society.

Regular meetings are held the third Thursday of each month at 8:30 p. m., at the Cook County Hospital. Membership —.

Officers.

President.....I. N. Danforth, 70 State st
 Vice President
 Secretary J. J. Alderson, 264 S. Halsted st

A regular meeting of the West Side Branch of the Chicago Medical Society was held in the parlors of the Cook County Hospital December 17, 1903, at 8.30 p. m., the president, I. N. Danforth, in the chair.

Minutes of previous meeting read and adopted.

Some Chicago Orthopedic Geography.

By Frederick Cleveland Test, A. M., M. D.

A preliminary report on investigation of deformities in Chicago, the present statistics covering 792 cases, and embracing not only a study of the character of the various deformities found in different regions of the city, but also a consideration of the race and nationality of the individuals affected.

Rachitic and tuberculous deformities each constitute about one-third of the orthopedic cases presented at Chicago dispensaries.

Rachitic deformities occur oftener in foreigners, especially those from warm climates, and dwelling in closely packed, tenement areas.

Tuberculous deformities are commoner

among Anglo-Saxons and others from cool climates.

In the cases from near the Stock Yards joint tuberculosis constitutes 40 per cent of all deformities, against less than 30 per cent for the rest of the city, the greater prevalence being considered probably due to infection from the large numbers of tuberculous animals constantly at the Stock Yards.

Congenital deformities appear to be commoner in the more highly civilized peoples.

Dr. W. C. Schroeder read a paper on **Subcutaneous Injuries of the Abdomen**. The paper was thorough, the doctor going over the whole ground relative to injuries of the abdominal viscera giving symptoms by which each might be diagnosed and differentiated, and treatment for these different injuries. He also exhibited numerous specimens obtained by post-mortem and operation relating to and illustrating the subject of the paper read.

An interesting discussion was participated in by Drs. Markley of Rockford, C. J. Rowan, A. I. Bouffleur, and closed by the essayist.

Adjourned to meet January 21, 1904.

A regular meeting of the West Side Branch of the Chicago Medical Society was held at the Cook County Hospital, January 21, 1904, at 8:30 p. m., the president, I. N. Danforth, in the chair.

Minutes of previous meeting read and adopted.

Dr. A. M. Stober, resident pathologist of the Cook County Hospital, presented specimens of Charcot's Joints, Rheumatoid Arthritis, and Tubercular Joints; called attention to the differences in appearance of each from the others and enumerated known theories of pathology of neuropathic arthropathies.

A. I. Bouffleur gave a surgical clinic presenting a case of **Lymphoedema of Right Leg**; dwelt on the pathology of the condition, differential diagnosis and methods of relief. Also presented a case of Charcot's Joint, a case of appendicitis after operation in which necessary drainage was by a split drainage tube through a button-hole incision external to the incision for operation. Also a man sixty years old on whom he had enucleated the enlarged prostate by the Goodfellow method.

A vote of thanks was given Dr. Bouffleur. Discussion by Drs. Robison and Danforth.

A constitution was read, then read by sections, and adopted after some changes, then adopted as a whole.

We have been the recipients at the hands of the internes of the County Hospital of much aid and courtesy, and to show our appreciation, on motion of Dr. Fitch they were made associate members.

In place of our next meeting we are to hold a banquet and the president appointed Drs. Bouffleur, Fitch and Rowan to arrange for one.

Adjourned.

J. J. Alderson, Official Reporter.

Chicago Pediatric Society.

Regular meetings held in Schiller Hall, the third Tuesday of each month from September to June, at 8 p. m. Membership 40.

Officers.

President M. P. Hatfield, 2979 Prairie ave.
Vice President S. J. Walker, 36 Washington st
Secretary Emma M. Moore, 6025 Prairie ave

A regular meeting of the Society was held in Schiller Hall, Schiller Building, Tuesday evening, February 16th, with the president, Dr. M. P. Hatfield, in the chair.

After the reading of the minutes an interesting programme was presented.

1. **Haemophilia**, Dr. Anna R. Lapham.
2. **Joint Complications in Haemophilia**, Dr. E. W. Ryerson.
3. **Report of Four Cases of Jaundice**, Dr. Julia D. Merrill.

On motion the meeting adjourned.

The Northwest Branch.

Regular meetings are held the first Friday of each month at 8 p. m., at Schoenhofen Hall Restaurant, cor. Milwaukee and Ashland avenues. Membership —.

Officers.

President.....M. H. Luken, 826 N. Irving ave.
Vice President.....Karl F. M. Sandberg,
684 N. California ave.
Secretary.....Louis J. Pritzker, 418 W. Division
Treasurer.....C. F. Roan, 740 W. North ave.
Councillor.....E. C. Seufert, 831 Milwaukee ave.

The Northwest Branch of the Chicago Medical Society held a splendidly attended regular monthly meeting on Friday, February 5, 1904, at its usual meeting place with Dr. M. H. Luken presiding.

The program consists of the following:

1. E. A. Fishkin presented two clinical cases and reported his experience with **X-Ray Therapy in Skin Diseases**.
2. Karl F. M. Sandberg read a paper entitled **Is Radio-Therapy of any Value in Pulmonary Tuberculosis?**

The papers were discussed freely.

Law Against Toy Pistols.

At the 29th annual session of the Mississippi Valley Medical Association held at Memphis, October 7-9, the following resolutions were adopted:

In view of the fact that more than 400 deaths from Tetanus occurred following the 4th of July celebration of 1903, as shown by the statistical report elaborated by Dr. S. C. Stanton, of Chicago, and published in the Journal of the American Medical Association of August 29, 1903, the great majority of which might have been prevented had proper precautions been taken; therefore be it

Resolved, That the conclusions which follow, as offered by Dr. Stanton in a paper presented

before the Association, at the above meeting, be endorsed as the sense of the Association, and further, be it

Resolved, That the Secretary be instructed to forward a copy of these resolutions and conclusions to the Medical Press, Associated Press, and the Secretaries of the several State Medical Societies, with the request that they publish same and take suitable action thereon.

1. Enforcement of existing laws regarding the sale of Toy Pistols and other dangerous toys.

2. Enactment of laws by the nation, states and municipalities prohibiting the manufacture and sale of Toy Pistols, Blank Cartridges, Dynamite Canes and Caps, Cannon Crackers, etc.

3. Open treatment of all wounds, however insignificant, in which from the nature or environment there is any risk of Tetanus.

4. Immediate use of Tetanus Antitoxin in all cases of Fourth-of-July wounds, or wounds received in barnyards, gardens, or other places where Tetanus infection is likely to occur.

5. As a forlorn hope, the injection of Tetanus Antitoxin after Tetanus symptoms have appeared.

NOTES ON FILIPINO DIALECTS.

By David J. Doherty, A. M., M. D., Chicago.

The following article by Dr. Doherty of Chicago, one of our members, who has spent some time in the Philippines is of such general interest that we give it a place although it is quite out of the ordinary scope of the contents of the Journal.

The principal object of my recent six months' visit to the Philippines was to gather materials for language-work. I carried a phonograph and in each province that I visited I found some intelligent native (usually a priest or a professional man) obliging enough to repeat into it, in his dialect, the Lord's Prayer and certain other sentences. I have brought home specimens of the intonation and pronunciation of words and sentences in Tagalog, Bisayan, Bikol, Ilocano, Pampangan and Pangasinano. These with Ibonaog or Cagayano (the province of which I had not time to visit) constitute all the dialects of the seven million Christian and civilized Filipinos.

I was also enabled, largely through the generosity of Mr. E. E. Ayer of Chicago, to acquire a number of the grammars and vocabularies of these dialects, besides many specimens of popular books and pamphlets which are for sale in all market places.

Furthermore, I encouraged my Tagalog teacher, Mr. Lope K. Santos, editor of *El Renacimiento*, in the organization of a Filipino Academy for the purpose of reforming and fusing the dialects into a common vernacular. The first meeting of the Academy was held on Sept. 3, 1903, in Manila and was attended by the editorial staffs of all the Filipino papers of the metropolis, several professors of the Filipino Liceo and the Instituto de Mujeres,

and a number of writers. Altogether about 30 attended, all from Manila; but the movement had the support of the native editors in other islands, to whom I had explained it.

Whilst not yet ready to make a scientific and full report on the Filipino dialects, it seems proper that I should publish these preliminary notes on the subject, both as an aid to other workers and as an appeal to them to co-operate with me.

1. The Use of English: Before I went to the Philippines I held the opinion that it was a futile if not an unjust thing to "force" a foreign language upon a whole people and especially a resisting people. But I was not long there before I saw that not only did the Filipinos not resist English instruction, but that they were eager for any kind of education. They were like thirsty people to whom a river suddenly becomes accessible.

It was clearly impossible to base an educational system on the six or eight dialects of the archipelago, not merely because our teachers did not know them, but chiefly because these dialects (or a common vernacular built from them) could not, on account of the paucity of literature, open the world to the Filipino. Hence it was an actual inspiration that led Professor Moses or Supt. Atkinson or Commissioner Smith or whoever was responsible, to cut the Gordian knot by making English the vehicle of school work. And it is the language of the schools; from the primary to the normal school, from the alphabet to the highest branches, English and only English is used; no other language is taught. The Filipinos do not resent it; knowledge in any language is what they want. Not the *illustrado* alone but the *tawo*, the man of the *barrio*, the peasant of the province, spoke to me their welcome to the school. If education is not compulsory, it is only because the Civil Government has not money enough to furnish sufficient school facilities; and if it were compulsory, there never could be amongst any people a compulsion so gentle, so welcome, and so efficient.

With all that, no one, neither Filipino nor American official, expects English to become the vernacular. Inside of ten years (and with such a bright people I cannot consider that a longer period of American tutelage will be necessary), it will become the official language of the islands and it will keep the Filipino people in touch with history and the world, and gradually knit them into the community of nations. But not for a century or more can it become the vernacular, because it is not the language of home life. Hence arises the necessity of perfecting the Filipino language: of fusing the seven dialects into a common one. This is work for every Filipino who loves his country (and they all do) and for every American scholar who desires that our country shall accomplish the work it has undertaken in the orient—the upbuilding of a nation that shall be a worthy offspring of this republic.

2. Relationship of the Filipino dialects: Let me premise first that the 500,000 Moros

who inhabit the Sulu subarchipelago are not Filipinos but are semi-civilized Mahomedans, and that they have no more to do with the Filipinos than Mexicans have with us; and second that the 100,000 Igorottes, Aetas, etc., who inhabit the mountains are not Filipinos but uncivilized tribes and have no more to do with the Christian Filipinos than our red Indian tribes have to do with our industrial, social or political progress.

There are seven dialects among the Filipinos, the principal being Tagalog and the others being variations of it. Several of these, especially Bisayan, have provincial but slight variations. The mutual intelligibility or unintelligibility of these dialects depends on the intelligence and education of the speakers. Ignorant peasants, who can not catch the resemblance of words nor ignore the intonations or accents, will not understand one another, but educated people can fairly understand and speedily acquire one another's special dialects.

As a rough estimate, I would say that more than 50 per cent of words are identical or very similar, whilst grammatical structure is identical in all dialects. The confusion arises chiefly from differences in intonation and accent.

Granted that this is so, can not, with the aid of the native press, the native writers, and the intelligent classes generally, these dialects be merged, by a process of give and take, into a common one? And can not such a common language, by its use in the schools (for we are fast training Filipino teachers) side by side with English become in a short time the vernacular of the Filipino people, the Filipino language?

3. The work done and to be done: The Philippine Academy has already agreed upon the letters to be used in the alphabet. This was of course not a dogmatic act, but a formal acceptance of a usage that has been growing for more than a generation and has been accepted in the daily press and many recent books. These letters are five vowels: a, e, i, o, and u; and fifteen consonants: b, d, g, h, k, l, m, n, ng, p, r, s, t, w, and y. It will be seen that c, f, q, z, are omitted, being substituted by k, p, k, and s, respectively. It is almost incomprehensible that Lendoyro should have persisted in the use of c, and q, in his recent English-Tagalog grammar. He told me that the opposition on the part of the Filipinos to these two letters was not scientific but political and anti-Spanish. Mr. Lendoyro is a Spaniard, not a Filipino, and he wrote most of his grammar (if not all of it) in Spain, outside the circle of the awakening Filipino mind. As a matter of fact, the objection to c, and q, is scientific, for much of the difficulty of Filipino orthography arises from the Spanish c being changed into qu before e and i in order to express the hard Filipino sound.

In the matter of fusing the dialects, I personally have done this much. Some years ago I began a card-index system of the Tagalog words which I found in Foreman, Worcester, Sawyer and other English books. Later obtaining Rosalio Serrano's Spanish-Tagalog Dictionary in the Ayer collection at the Newberry Library of Chicago, I transcribed all its words, so that I have now almost ten thousand Tagalog-English cards and a corresponding number of English-Tagalog ones. I have recently obtained a copy of the improved Spanish-Tagalog Dictionary of Pedro Serrano, son of Rosalio, and also a copy of Father de Noceda's Dictionary of Tagalog roots.

I am now adding new cards day by day, as I find time, to my collection. The next step is to add to each Tagalog card the corresponding word in the other dialects. Then from the series of seven words, the Philippine Academy will be asked to select the one which shall be used in the common vernacular. I know that neither by law nor by authority can a language be created, but every one will admit that usage (which is the basis of language) can be molded by the action of the press and the writers.

Much can be done for this work by the Civil Government if it will encourage its teachers and other employes to study the native dialects, to translate useful books into them, and to get by means of them into close touch with the people. Such translations (of Smiles' Self-Help, Mills on Liberty, etc.) contributed largely to modernize Japan. I found in the islands some teachers who were working in the right spirit in this direction, and one (Mr. P. S. Neilson) has already published a small English-Tagalog and Tagalog-English Dictionary.

But our aim must be not to perpetuate the dialects as dialects but to merge them into a common speech. The benefits of a common vernacular to a people in a political, commercial and literary way are so great and so apparent that I need not dwell on them. But I may mention that the Manila representative of the British and Foreign Bible Society hailed with joy the project, declared it would simplify the society's work and saves its money, and said he would hold back the manuscript translation of the old Testament, then ready for the printer, so that he might adopt the alphabet and spelling to be agreed upon by the Philippine Academy.

In conclusion, I desire to express my gratitude for the encouragement and courtesies I received from Col. Clarence F. Edwards, Chief of the Insular Bureau at Washington, and from Hon. James F. Smith, the broad-minded Secretary of Public Instruction at Manila.

582 LaSalle ave., Chicago, Ill.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

GLYCO-THYMOLINE AND THE IMITATORS.

Whenever a superior article gains the confidence of the medical profession a host of imitators rush in to snatch the crumbs which fall from the table of the originator. A distinguished chemist may experiment for the better part of a lifetime endeavoring to accomplish some desirable combination which will produce a certain desired therapeutic result. To bring this about there may be the most subtle blending of materials with a resultant compound practically impossible of duplication except under the same exact conditions. It is then that the imitator gets in his work.

A physician recently referred to imitations of Glyco-Thymoline by comparing them to oleomargarine, which is not generally to be used unless it is impossible to get butter. This comparison, however, does not really do justice to the case. A therapeutic agent which is "almost as good" should be under the ban of every physician.—Monthly Cyclopaedia of Practical Medicine, December, 1903.

Messrs. Park, Davis & Co., have submitted the following communication:

Dear Sir:

You have heard the clamor about Antitoxin. Do you wish to know the exact truth respecting prices, grades, packages, etc.? Would you like to judge for yourself?

1. The recent change in prices is a **reduction, not an advance**. See enclosed comparison.

2. A single grade of serum now supersedes the two grades heretofore in vogue, thus doing away with all confusion between "standard" and "special," X and XX.

3. Five packages or doses replace the ten heretofore supplied—this with a view to reducing the enormous loss and waste of returned serum.

4. Approximately 40 per cent of all serum is returned for exchange. What becomes of the returned serum? It is all destroyed.

5. We keep in stock, for sale on demand only, but without formal addition to our list, a 500-unit dose and a 1,000-unit dose, both in the old-style hermetically-sealed bulb, without injecting device, at the respective prices of 75 cents and \$1.50, as in the past.

6. The doses and potency of the new grade are stated on the enclosed memorandum.

7. To boards of health and municipalities we will supply on application a pure, safe and reliable serum of guaranteed potency, at a specially low price commensurate with cost on the following conditions: (a) that it is to be donated to the indigent sick and not resold; (b) that it is not subject to exchange; (c) that it is to be supplied in hermetically-sealed bulbs unaccompanied by either of the injecting devices furnished with our regular product at the option of the purchaser.

8. There is no "Antitoxin Trust" or monopoly of any character.

We shall be glad to answer in person at our office, or by letter, any questions which you may wish to put to us.

Faithfully yours,

THE COUGH—SEQUELA OF LA GRIPPE.

Dr. John McCarty of Briggs, Texas, (Louisville Medical College) in giving his personal experience with this condition, writes as follows: "Ten years ago I had la grippe severely and every winter since, my cough has been almost intolerable. During January, 1902, I received a sample of Antikamnia and Heroin Tablets and began taking them for my cough, which had distressed me all winter, and as they gave me prompt relief, I ordered an ounce box which I have since taken with continued good results. Last fall I again ordered a supply of Antikamnia and Heroin Tablets and I have taken them regularly all winter and have coughed but very little. I take one tablet every three or four hours and they not only stop the cough, but make expectoration easy and satisfactory."

CHICAGO POLICLINIC AND HOSPITAL.

Special Clinical Course in Surgery, Gynecology, Dermatology, Orthopedics, Rectal and Genito-Urinary Diseases.

Our regular annual special course in the above branches will begin Monday, April 11, 1904, and continue for three weeks. The work will be clinical and eminently practical and will be supplemented by representative clinics by members of the faculty in other branches, making it of great value to the practitioner. There will be evening lectures and special work in the Anatomical and Pathological Laboratories. For programs and full information address

M. L. HARRIS, M. D., Secretary,
174-176 E. Chicago Ave., Chicago, Ill.

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

Vol. V. No. 11. }
25c per copy }

Springfield, Ill., April, 1904.

{ SUBSCRIPTION
\$3.00 A YEAR.

HYDROTHERAPY.*

BY OSCAR J. PRICE, M. D., CHICAGO.

It has been said that an era of physiological medicine has begun. If so, medical inquiry may be expected to turn somewhat from its former reliance upon drugs in the treatment of disease, to the adoption of more natural and physical measures.

It must be admitted that modern research, coupled with more precise methods of investigation, have made the positive and exact diagnosis of disease, nearly always accomplishable.

We may not speak with equal confidence, however, as to the therapeutical means at our command, for the successful treatment of the same.

Indeed if we stop to enumerate the number of maladies for which we may truly say we have an established specific, we can easily count them upon the fingers of our hands. And yet we are daily reminded of the "Potent and wonderful efficacy" of newly discovered drugs.

In all this mysterious search, and experimentation in the laboratory, it is quite possible we have overlooked and underestimated, the simplest of all remedies, nature offering, water.

No apology therefore, is deemed necessary, in briefly reviewing the present status of rational hydrotherapy. If the effort shall have refreshed the mind with what may reasonably be expected to accrue, from a more or less general adoption of its principles, where indicated, its purpose will be accomplished. It will be understood, however, that in such a brief survey, it will not be possible to enter at length into the physiology involved, the object being the bare presentation

as a *resume* of what has been found by practice, to be a scientific and curative application of water to the human system.

Physiologically the action which takes place in producing such results are caused by impressions made upon the peripheral vaso-motor nerves, which conveyed to the central nervous system, thereby affects the respiration, the heart, and the distribution of blood.

Thus we may understand that a quickened respiration must affect the circulation also; that the friction caused by a continued quickened circulation of the blood through its vessels aids in producing the phenomena of heat, or increase of temperature.

The temperature effect which may be produced by heat and cold doubtless forms its chief therapeutical action.

The direct effect of cold is to reduce cell activity, while heat increases it; but the indirect effect brought about by reflex agencies, so long as temperature is but little disturbed, is to increase oxidation by the application of cold, and to diminish it by the application of heat. Deep involuntary inspiration increases the supply of oxygen.

In this way changes in tissue metamorphosis occur which may result in an increase of flesh. This change is generally accompanied by an increased excretion of carbon, and in hot baths, by a marked excretion of uric acid, which when coupled with abstemiousness in the use of fatty food, generally results in a reduction of corpulency.

That hydrotherapy may promote such tissue change is shown by Winternitz, in that among several thousand cases treated in his establishment 56 per cent gained weight, 30 per cent lost, and in only 14 per cent no change occurred.

Simon Baruch confirms these views by his observations, which were confined to only incurable cases in the Montefiore Home. He states that the general condition and weight

*Read at a Meeting of the Chicago Therapeutic Club, Oct. 22, 1903.

of a large number of cases, whose hopelessness had been attested by previous unsuccessful treatment, was very materially improved by carefully applied cold water applications. This would seem to establish the fact, that accompanying the acceleration of the action of the heart and respiration, decided impressions are made upon the nutritive processes.

M. Thermes, in a paper before the Société d'Hydrologie, presented the results of careful measurements with Hayems haemometer, conclusively demonstrating that by the judicious application of cold to the periphery, the number of the blood corpuscles was increased, and their quality much improved.

It must therefore be evident from these observations, that hydrotherapy is an established power. A power that may be employed with great benefit, when intelligently used, or for much harm if carelessly or improperly employed.

As embracing thermic effects alone or unaided, may be enumerated water baths; immersions; compresses; hot and cold douches; packs; hot air; vapor and electric baths; and all other forms of heat and cold as applied to the body by means of water.

Applied externally or internally, generally or locally, both the circulation and the supply of blood, may be materially influenced.

At the outset it should be remembered that a brief and intense application of cold, is a stimulant, because followed by a corresponding reaction; but a prolonged application may not be followed by this reaction, and hence become a depressant.

There are perhaps no class of cases which so universally demonstrate the usefulness of hydropathic measures as fevers. Especially typhoid. It has indeed become almost axiomatic the precept, to resort to cold water baths for the reduction of temperature. The record of recoveries, under the Brand method has been very large. And yet the exceptions and modifications to its universal employment, should be carefully understood.

Not long since at the Monroe Street Hospital, a case of typhoid came under the writers observation which illustrates this. A nurse who had contracted the disease while in attendance upon a similar case.

I think it was in the latter portion of the second week, and just following a consultation which had been held, at which an absolutely hopeless prognosis had been made. The temperature had been running very high; the patient was in an unconscious condition, with rigidity of the muscles of the jaw and throat, preventing the introduction of food or medicine by the mouth. The fortunate opportunity was given me of observing her condition upon her emerging from the tubbing which had been a part of the treatment thus far. Not the slightest reduction of temperature had been accomplished by it. The pulse was most feeble and rapid, and there was a quite marked cyanotic appearance, with cold extremities. To my mind it was evident another tubbing would be fatal. The shock was more than her powers of endurance would stand. The burden placed upon her enfeebled heart was too great. There was little or no reaction, and marked depression.

No attempt at tubbing was again made. Alcoholic stimulants and liquid nourishment was regularly introduced into the stomach through a tube, reaching it through the nose. Sheets wrung out of warm water were occasionally employed as a pack, with vigorous rubbing to establish peripheral circulation, and the result was that the patient gradually improved, and in a few days was fast recovering.

Reaction is the important thing to be considered. The effect of cold applications must not be prolonged, and should always be accompanied by reasonably vigorous massage.

According to Kellogg the action of cold produces contractions of the vessels of the part to which it is applied, and also a similar effect to other parts symmetrically related thereto. For instance—cold applied to one hand causes contractions of the vessels of the other hand. A piece of ice held in one hand causing shrinking of the other within a few seconds. Also a similar illustration by Brown-Sequard showing that immersion of the hand in cold water produces a lowering of the temperature of the other hand; the effect being purely local and not influencing the general temperature. Also that cold ap-

plied to the trunk of an artery produces contractions at the distal portions; as example.

An ice bag over the femoral artery lessens the circulation in the leg. Or to the bend of the elbow, the circulation of the hand.

Strasser claims that general applications of cold increases the alkalinity of the blood, and that from 40 to 50 per cent diminution of the acid phosphates occur.

Flcury demonstrates that following the cold douche there is a marked absorption by the gastric and intestinal mucous membrane, thereby substantiating the claim previously alluded to, that nutrition is greatly promoted. This applies to some forms of anaemia; an exposure of from ten to twenty seconds, the patient being progressively trained to stand lower and lower temperatures. Also cold friction, or the tonic pack with the water from 70 to 80 degrees.

In some forms of cerebral congestion, cold applications have been followed by marked relief, thereby diminishing the caliber of the cerebral vessels, nutritive changes being established.

In neurasthenia, or hypochondriac tendencies, the stimulating and tonic effect of the cold douche or bath, is not unfrequently quite marked. Indeed the cold bath or douche may be said to be a general tonic measure, indicated and applicable to a very large number of conditions, but always with some restrictions, and in some few cases—with positive exceptions.

With the well it affords an additional stimulant both to mind and body; it arouses dormant energies and exhilarates the ambition; but like all other agents of great good, it is capable of being converted into a means of injury as well. The period of exposure must be guarded at first, and gradually increased as the system becomes accustomed to it. Even the weak and nervous subject, who certainly needs the tonic effect which it may produce, can receive this treatment, if approached by degrees, both as to time and the intensity of cold applied.

The very aged and the very young stand it poorly, and persons with sclerotic vessels hardly at all.

The effect of the short cold bath or douche is marked in increasing muscular capacity,

even paretic voluntary muscles not unfrequently responding temporarily to its use. Also some forms of insomnia are greatly improved.

The circumscribed effect of cold applications, where local action only is desired, is not to be governed by the same care as to reaction, as it is not necessary to obtain it. The temperature of the part is reduced by continuous applications without thereby lowering the general temperature or vitality.

The internal use of water also has its place, and should be considered in passing. The liberal drinking of cold water is also a means of combating temperature. It dilutes the blood, absorbs heat, and by exciting the kidneys to greater action, produces an elimination of toxins which frequently give rise to temperature. It may also be employed as an enema in rather liberal quantities, for the same purpose, especially in fever patients, the results being quite satisfactory. Water drinking as a means of health is not sufficiently appreciated.

When we stop to consider what a large per cent of water constitutes the normal body, and that it is this medium which carries nutrition to every part of the same, as well as waste matter out of the system, we can better understand the importance of a bountiful supply.

It is said "Blood is thicker than water." But from a medical standpoint there is danger of its becoming too thick. The blood should be thinned by copious water drinking, in order to keep in proper activity those most important functions performed by the skin, kidneys and bowels. Two or three glasses should be drunk before breakfast and also an hour or so before dinner. Some have found it advantageous to also drink freely before bed time, finding it to be all that is needed to regulate the bowels. In fevers a glassfull of water should be drunk every hour or two. It is not the authors belief that free water drinking should be indulged in, in connection with meals.

Having rather briefly glanced over some of the general principles for the application of cold, it will now be proper to consider the differences which exist between cold and heat, and the use which the latter may be

put to in the human economy. According to Kellogg. "The primary effect of cold is depressing, while that of heat is an excitant. The limited, or short effect of cold, is attended by a tonic reaction, while that of heat is still depressant, and followed by atonic reaction. The prolonged effect of cold is depressant, while that of heat is mixed, excitant and depressant. The effect of cold on the skin is diminished activity, while that of heat is increased activity. On the heart, first quickened then slowed, with increased force, by cold; while it is first slowed then quickened, with decreased force, by heat."

Of thermic applications, the hot bath and the hot douche and compress, are most employed. The action of the hot bath raises the temperature, increases the pulse and respiration, and aids in tissue metamorphosis. In rheumatic and gouty affections, in dropsies, in chronic nephritis, and in general obesity, they often afford marked benefit.

They are notably diaphoretic, and are generally indicated in that class of cases where elimination through the skin is called for.

The general impression is calmative and sedative, but it is always necessary to observe great care in avoiding cerebral excitement.

The ice cap, or cold compress to the head, are important measures in preventing this occurrence. At the same time the condition of the heart must be watched. The well-known haemostatic action of hot water renders it a very useful agent in controlling hemorrhage. That is, certain forms of hemorrhage, such as capillary oozing.

In hemorrhage from the uterus; in menorrhagia and metrorrhagia; the hot uterine douche, or the sitz bath, are often very efficient. Also in nasal hemorrhage, the hot water douche will frequently afford prompt relief. The graduated hot bath, or the hot blanket pack, is invaluable in some forms of infective fever, scarlet fever, measles, or smallpox, where the eruption is delayed, with high nervous tension, and convulsions occurring. It is also of special value in the renal involvement of acute nephritis following these diseases, with suppression of urine; also in the puerperal state, originating from the same cause.

The purely local effect of hot water, is generally accomplished by the compress, or rubber water bag. In this way sprains, bruises, or contusions, and painful local inflammations generally, are successfully treated.

As to hot water drinking, its effects internally are much the same, contrasted with cold water, as already stated when applied externally. It may be stated the general effect is debilitating. In gastrorrhea, in gastralgia, and in some forms of vomiting, it has been found to be beneficial.

THE BACTERIOLOGY OF MILK.

BY W. K. JAQUES, M. D., CHICAGO.

Milk may be considered the excreted fluid tissue of the cow. It resembles the blood of the animal in many respects. The cells pass through a definite course of changes the same as other living cells. When blood is shed, there is set in motion a line of changes that cause clot, the setting free of germicidal properties, enzymes, etc. Similar changes occur in milk as soon as it passes from the animal.

For the convenience of description, the normal bacteria of milk may be divided into two classes: the streptococci and the acid producing bacteria.

The streptococci include the saprophytic bacteria found on the normal skin of the cow which pass up into the udder and colonize in the lacteal ducts. The first portion of milk drawn has in it a greater number of streptococci than are found later.

The number of bacteria depends on many factors, one of which is the resisting power of the animal. Any bacteria that are present in the air and find in milk the conditions for multiplication, may be introduced into it at the time of milking. With the most careful precautions, milk drawn from the cow may contain from six to twenty thousand bacteria per c.c. Its germicidal properties are set free to the point of retarding and destroying bacteria for about fourteen hours and an examination of milk at this time will often show that the bacteria have decreased one-

half. However, the germicidal power of milk varies with each cow.

It was found at the U. S. experimental station in Connecticut that the bacterial counts of the milk from cows at the time of milking varied greatly; also that the germicidal properties varied so that milk which showed fewest bacteria at milking time had least restraining power and would have the largest number of bacteria at the end of fourteen hours. The experiments were made with milk at the ordinary temperature during the month of October.

The government has also shown that aeration at the time of milking is of great value. Milk is saturated with the natural carbonic acid of the animal when drawn. Its presence favors bacteria causing bitter and stringy milk; its removal and the introduction of oxygen causes the harmless bacteria to grow as well as the oxidation of poisonous bacterial products. Experiment shows that the aeration of milk will extend its sweetness several hours.

Low temperature has a similar effect on milk as on meat. Chemical and bacterial activity are retarded or arrested. The lactic acid bacteria by their multiplication bring about conditions that retard the growth of the streptococci and these gradually decrease as the milk gets old. It is suggested that this property is extended into the alimentary canal and there prevents the increase of poisonous bacteria.

The number of bacteria per cubic centimeter in milk is an uncertain index of its quality. It is not the number of bacteria but their disease producing powers that interest physicians. The ordinary saprophytic bacteria of the cow's udder may become virulent if that cow has fever, improper food, or is placed under conditions that impair her vitality. Some of the harmless bacteria of the air become poisonous when introduced into milk that is improperly kept. As a rule the danger to milk comes not so much from bacteria of the country as from careless handling in the city, where the dirt is made up largely of excreta. A Petrie plate exposed sixty seconds on a windy day at the foot of Randolph street showed thirty-two thou-

sand bacteria. What can be the result of bottling milk in such an atmosphere?

Infection from bottles constitutes the greatest danger. As a rule, the driver of the small dairy washes the bottles. If they look reasonably clean when he gets them from the customer they are not washed at all. I witnessed the washing of the bottles in one dairy. They passed through two tubs. The first one contained a solution of washing soda and the second had been filled with water from the city tap. The bottles were first washed in the soda solution, then rinsed in the hydrant water and turned upside down to drain. At this time the city laboratory tests were demonstrating that the city water was simply dilute sewage. Typhoid fever was prevalent. If any one of these bottles had come from a house in which there was typhoid, scarlet fever or diphtheria, it would have infected the water so that all other bottles passing through the same water would be infected.

The presence of valuable properties in milk may not be shown by chemical and bacterial analyses. A native cow on a pasture range, with pure water and hygienic stables, will produce a milk of higher nutrient value than the finest Jersey cow kept in the city.

It should be born in mind also that milk is but one factor in improving poor nourishment. It is almost as important to change a child's environment so as to stimulate its digestive power. It is not alone the country milk that improves the city child but it is the life-giving sunshine and fresh air, perfect sleep and absence from nerve irritation that stimulate the digestive powers. When considering the nutrition of a baby the following suggestions may be of value:

Less cream should be used in hot than in cold weather. Less when the child is confined than when it is in the open air. Most mothers desire fat babies and are inclined to increase the cream. Condensed milk will make fat babies but the fat is produced when other tissues are starving for proper food. The child will sooner or later pay the penalty of malnutrition. If it is doing well on unmodified milk, let it alone. The digestive power of many a child has been impaired by predigesting its food. The functions of

digestion are maintained and strengthened by use. Digestives and predigested food should only be used when indicated in emergencies and never as a steady diet.

On a quart of bottled city milk there should be at least five ounces of cream. This represents about one ounce of butter fat. To estimate amount of cream, stand the bottle on a level and mark the cream line. Pour off the cream to this line and measure it. This test is sufficiently accurate for baby feeding and for estimating the quality of the milk.

There is danger that the force of the present milk crusade may be spent in misdirected effort. The housewife should not worry over the dirt at the farm. It is not the dirt from the hands of the farmer boy but that from the infected hands of mothers and nurses that is most to be feared. Like charity, a milk investigation should begin at home. When the housewife discovers that the milk is properly kept there, she has made a good start. Then she should investigate the milkman and his wagon. Ascertain if he sterilizes his bottles and milk cans; or if he gets his milk from some reputable farmer instead of from slop-fed cows. Let the milkman know that some interest is taken in the kind of milk he delivers. Milkmen are like politicians; their existence depends upon giving what the people want. If properly handled pure milk is demanded, it will be furnished. The finest milk in the world is sold in Chicago at 7 cents a quart, and both farmer and milk dealer are prosperous.

The education of people as to proper methods of keeping milk and the essentials of the product is in the hands of physicians. The City Milk Bureau can be greatly assisted by the doctors if, when they suspect the milk their patients are getting is not good, they will request them to send a bottle of it to the laboratory with the name of the milkman. If the milk is found below standard, an inspector will be sent to the milkman and another sample tested. If this is below grade, the dealer will be prosecuted. Neither the physician nor the patient will be known in the matter.

4316 Greenwood Ave.

REPORT OF A CASE OF MULTIPLE CYSTIC LYMPHANGIOMA IN CONNECTION WITH THE PERITONEUM AND VISCERA.

BY SVENNING DAHL, A. B., M. D., CHICAGO.
Attending Surgeon, Norwegian Deaconess Hospital, Chicago.

I believe cystic lymphangioma in connection with the peritoneum and viscera to be sufficiently rare to merit mention; and the difficulty which presents itself in making a diagnosis before, during, yes, sometimes even after the operation makes the histories of such cases interesting and instructive.

The case I want to report is that of a woman, wife of an Iowa farmer, aged 56, born in Norway, who came under my care in November, 1903.

Family history is good. Her personal history is most excellent. No diseases of childhood; and she denies ever having been sick before the present trouble began, one year and a half ago. Her menses commenced at eighteen; she was married at twenty-two, and is the mother of eleven children—six living and healthy in every respect, five died at ages varying from two to eight years. Menopause arrived at the age of 48, but gave rise to no special disturbance. No history of syphilis or of any trauma could be elicited.

About one year and a half before she came under my observation she noticed a swelling in the right hypochondriac region and experienced a sensation of fullness. Dyspeptic symptoms developed, such as belching, pyrosis, sometimes nausea, a great deal of oppression after eating and some tenderness over epigastrium. She consulted her home physician, but grew worse. January 6, 1903, she consulted a surgeon of repute in Minnesota, who pronounced it an inoperable tumor of the liver.

The dyspeptic symptoms increased and at last she could only retain liquid food in very small quantity in consequence of which she lost considerably in weight.

She entered the Deaconess Hospital November 30, 1903.

On examination she was found to be rather strongly built, slightly anemic, sallow com-

plexion, no jaundice, no cachexia. No enlargement of the lymph-glands anywhere. The abdomen looks a little full. No dilatation of the superficial veins. Below the right costal margin in the epigastric region and extending into the right lumbar and right upper part of the umbilical region an uneven enlargement can be seen beneath the abdominal wall, moving with the respiration.

On palpation the upper portion of this enlargement feels nodular in a line corresponding to *margo acuta hepatis*. Under this nodular edge follows a sort of shallow groove, below which again a very large tumor is felt which is not nodular. The whole mass was but very slightly movable, but I thought I could make out that the smooth, large tumor below was intimately connected with the upper nodular masses. No fluctuation could be obtained. By placing my left hand under the right loin and pushing with the right hand the lower, smooth mass backwards, the motion of the tumor was distinctly felt. (Guyon's *Ballotement*.) There was complete dulness over the upper nodular portion of the tumor and over the outer lateral part of the lower large tumor, continuing into the right flank, while flat tympany was elicited over its inner portion. By distension of the colon with air this tympany was enhanced. Clearly, the colon was in front of that portion of the tumor. Liver dulness commenced at the sixth rib in the nipple line. No dilatation of the stomach. Lungs and heart normal. Repeated complete urinalyses proved the urine to be normal.

Patient complains of a constant sensation of fulness over the epigastrium. The liquid food which she takes in small quantity is rejected by gulping, not by actual vomiting.

From these physical signs it is evident that an exact diagnosis before the operation was an impossibility. The tumor might be of pararenal, hepatic, pancreatic, as well as of peritoneal origin. However, it seemed tolerably certain that the tumor was benign in character, as serious deterioration in the health did not seem to be present in spite of the gastric symptoms.

An operation being consented to, I proceeded with a laparotomy on December 4,

1903. Longitudinal incision through the right rectus from the costal margin, three inches downward, over the most prominent part of the tumor masses. A rather thin walled cyst presented itself at once. Three pints of almost water-colored fluid was evacuated. This cyst represented the lower, smooth, larger tumor, and the hand introduced into the emptied cyst found it to have a very extensive base, springing, as it did, from the peritoneum covering the kidney, renal vessels, vena cava, aorta, funiculus hepatis, and the whole under surface of the right lobe of the liver. The gall bladder was empty and by the tumor pushed anteriorly, so that it hung beyond the acute margin of the liver.

After this large cyst had been emptied, the acute margin of the liver presented itself at the opening and on the upper surface of the liver, but close to the margin was seen in a row five smaller cysts, varying in size from that of a hazel nut to that of a lemon. These smaller cysts, which represented the nodular, upper enlargement spoken of above, were emptied and partly excised and partly cauterized. I deemed it inadvisable to attempt the extirpation of the larger cyst on account of its extensive and intimate connection with so many vital organs. Therefore, after division of a few ligamentous adhesions between the cyst and duodenum, I sutured the cyst to the abdominal wound, and packed it completely with gauze. There was no shock, nor any rise of temperature after the operation. First packing was allowed to stay in place five days, after which it was changed every three days. During the first three weeks the lumen of the cyst obliterated very much; after that the obliteration went slower.

Six weeks after the operation, the patient being anxious to return home, and not wanting to go home with a fistula, I decided to extirpate that part of the cyst, the lumen of which had not yet obliterated, and in this way be able to close the fistula. This was done, and the woman left the hospital three weeks later completely cured. There was, after the operation, absolutely no return of the distressing dyspeptic symptoms, which probably were caused by pressure on the

pyloric end of the stomach and the duodenum.

The report of the pathologist on the analysis of the cyst fluid is as follows:

Physical condition.....slightly cloudy
Specific gravity.....1.009
Albumen.....9.0% volume Purdy
Sugars absent
Bile absent
Blood0.1% volume
Urea trace
Ferments—proteolytic and diastatic...absent

Microscopic Examination.

Red blood cells.....numerous
Polynuclear few
Lymphocytes few
Epithelium absent
Organism of all kinds.....absent
Cultures.....negative results
The fluid was sterile.

622 North Hoyne Ave.

PEMPHIGUS CHRONICUS.^{1*}

BY E. A. FISCHKIN, M. D., CHICAGO.

Adjunct Professor of Dermatology, College of Physicians and Surgeons; Attending Dermatologist Cook County and Norwegian Lutheran Deaconess Hospitals, and United Hebrew Charities Free Dispensary.

The object of this paper is to report a few cases of pemphigus, which came lately under my observation.

Case I. M. S—, German, housewife, 37 years of age, twenty years in America, had suffered during the last two years with the present disease, which appeared periodically every three or four months, remaining in the acute stage for about three weeks, then retreating, though at no time being entirely free from the disease.

Present history: Fairly well built, with anemic appearance; married for last fifteen years; was confined six times. Four children living and healthy: one died of diphtheria and one of pneumonia. Patient never had any constitutional diseases. Her present disease began during the winter of 1899, after having passed through a siege of ty-

phoid fever of moderate severity. Present disease commenced with the appearance of bullæ under the arms and on the sides of the abdomen, leaving, after rupturing, a severely inflamed skin. These inflamed areas troubled her continually, being more severe immediately after disappearance of the bullæ.

The first examination showed a typical picture of subacute eczema, the skin being edematous over abdomen and arms, moist, and covered with crusts; on chest and neck the skin was erythematous and scaly.

Under astringent dressings, followed by Unna's glycogelatin paste, the eczema disappeared and the skin became smooth and of normal appearance; but the skin over the abdominal region retained an erythematous scaling with a tendency to become edematous and even weeping at the slightest irritation. Suddenly there appeared on apparently healthy skin single bullæ with clear serous contents, varying in size from a pea to that of a hickory-nut.

On the surface of the thorax the bullæ were in distinct groups. After puncturing the bullæ and covering them with a drying paste the bases soon dried, leaving a red, infiltrated surface, which soon became surrounded with urticaria-like spots, which became confluent and moist, presenting the picture of a subacute eczema.

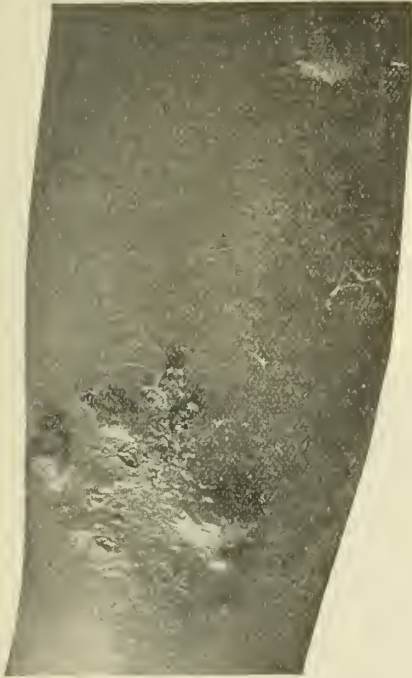
With treatment these inflammatory conditions disappeared, but the skin at these places remained red for some time. In nine weeks, during which the patient was under my treatment, I noticed two such bullous attacks, always setting in with clear blebs on the healthy skin, lasting for a short time, and being preceded by a papulo-vesicular eruption of longer or shorter duration.

Case II. L. K—, a boy eight years of age, of Russian parentage, came last winter to the United Hebrew Charities Dispensary with bullous eruptions on the lower extremities. There were disseminated bullæ about the size of a hazelnut with seropurulent contents, sparingly distributed over the thighs and legs. The mother reported the occurrence of such an eruption several times during the

¹Read at the fifty-third annual meeting of the Illinois State Medical Society at Chicago, May, 1903.

*We are indebted to Dr. Harold N. Mover, Editor and Mr. W. M. Warren, Publisher of Medicine, for the use of the cuts in this article.

previous two years. They were always accompanied by intense itching, the skin being otherwise normal.



Case II.—Large disseminated blebs on anterior surface of leg. Similar lesions on posterior surface. (The light masses in the region of eruption are remnants of white paste.)

The treatment consisted of puncturing the bullæ and the application of drying pastes. Under this treatment the eruptions disappeared quite readily, but came back in about ten weeks.

Case III. O. F—, a German-American railroad brakeman, 36 years of age, had variola at the age of two and a half years, and has been well since. Father died of blood poisoning at 59; mother died of carcinoma of the uterus at 75; one sister living and well.

Present disease commenced six weeks ago, starting with intense pruritus, which was aggravated by heat. On the otherwise normal skin of the hypogastrium there soon appeared small, red, elevated spots of pin-head size. The eruptions as well as the pruritus continued five days without constitutional symptoms, such as fever, headache, etc. On the sixth day there appeared in place of these spots small vesicles varying in size from that

of a pin-head to that of a pea, which began to rupture two days later. The eruptions then spread rapidly over the sides of abdomen and legs. These eruptions consisted of much larger bullæ, growing larger as they extended downward, reaching on the legs the size of a plum. These eruptions also were not accompanied by any constitutional or subjective symptoms. Severe, unbearable itching existed only when the bullæ were tensely distended, and was relieved when the bullæ ruptured.

At this time (January 13, 1903) the patient entered the Cook County Hospital. The eruption lasted about one week. After rupturing the bullæ soon dried up into thin crusts. During the eruption there were constantly new crops of bullæ appearing, some disseminated and others grouped around other older bullæ. On some parts of the body, as upon the thighs, they were aggregated in large masses covering the inner half of the thighs. While drying, the skin was stretched and cracked easily, permitting an oozing of blood; the crusts then falling off in large scales.

Three weeks later, after the eruption was disappearing, there came a new crop, which spread mainly upward, covering chest, neck, and arms, and passing, in the main, through the same stages of development. A third eruption appeared on the fifth week with bullæ of smaller size.

Localization: On the right side of neck there was an aggregation of some twelve or fifteen blebs. Many were disseminated over right side of chest and mammary region. On the left side they were grouped in a horizontal line, disseminated on the arms, and grouped on the forearms, spreading from the flexor to the extensor surfaces. The abdomen, penis, and scrotum were nearly covered with bullæ. The thighs, especially the inner surfaces, were so thickly packed with bullæ as to present the appearance of a conglomerate mass. The bullæ on the legs were less numerous, but of larger size. Upon their disappearing, and the falling of the crusts, there remained a thickened sub-epidermally infiltrated skin, having a bluish-red color which did not disappear for a long time, and

covered with scales. In some places the infiltration disappeared, leaving in its stead a brownish pigmentation. (The accompanying photograph was taken during this stage of the second attack.)

Three weeks after the disappearance of the second attack a new crop of smaller bullae appeared. The patient left the hospital before this attack was over. At all times the eruption consisted of bullae only.

Case IV. D. L., Polish, 20 years of age; two years in America; laborer; family history negative.

Patient entered Cook County Hospital on the 10th of January, just ten days after the

fairly well developed; face appeared anemic, with an expression of pain. He complained of lack of appetite, insomnia, and a moderate itching. The temperature ranged from 100° to 102°, the pulse 80 to 96, respiration 20; physical findings normal; urine contained a small amount of albumin.

Localization: Almost a universal dissemination. The bullae were tensely distended, varying in size from that of a pea to that of a half-dollar, and aggregated into large groups of irregular formation. In some places there were dried-up crusts covering erythematous infiltrated skin. The contents of the bullae was clear serum, there being



Case III.—Vesicles and blebs, partially dried, in irregular grouping.

first appearance of the disease. There was no prodromal stage. Sudden onset of small vesicles on a non-reddened skin, spreading from shoulder to neck and face, then down in front over chest to umbilicus. He felt sick, had a fever, and was forced to go to bed. Five days later a new crop appeared of much larger and more distended bullae, attacking the previously outlined areas, and spreading to the back, arms, and legs. At this period he had articular pains and swelling of the ankles. These symptoms brought him to the hospital.

The patient was a medium-sized man,

only two or three hemorrhagic vesicles over the sides of the chest. On the arms the eruption showed a distinctly circular configuration, new bullae encircling the old ones, resembling very much the picture of herpes-iris.

On the anterior surface of the chest the bullae disappeared, leaving in their stead erythematous spots, which disappeared on pressure.

On the back there were large groups of partially new and partially dried bullae. The lower extremities were sparingly affected, the

inner surface of thighs being free. When the eruption had almost disappeared there came a second attack (on February 2), the new bullae appearing over healthy skin. With this eruption there was a moderate elevation of temperature, slight itching, but severe depression. The duration of this eruption was about ten days. On the 10th of February, before the bullae had entirely dried, there appeared on the penis an edema about the thickness of the finger, from the sulcus to the root. This edema could be displaced by kneading. After two days this swelling of the penis increased to the size of a fist, with a contracted

contents of the blebs from this patient were made by Dr. F. G. Harris.

Blood: Whites, 10,400; reds, 4,024,000; no eosinophils.

Contents of vesicles: Mononuclear leucocytes; some eosinophiles; polymorphonuclear.

Contents of pustules: Many polymorphonuclears; some mononuclears and eosinophiles.

The treatment of both of these cases consisted of internal administration of tonics and external application of Unna's sulphur paste.



Case IV.—Well marked erythematous spots on chest. Herpetiform groups on arms.

ring at the middle. The epidermis was swollen, but not separated from the lower tissues. The phimosis disappeared upon elevation and astringent dressings. But on February 15 there appeared an edema of the entire epigastric region, from symphysis to umbilicus, which was also without separation of epidermis of this part and without formation of bullae. At this time but few subjective symptoms were evident, and patient left the hospital February 17.

Microscopic examination of the blood and

Case V. N. H., Norwegian tailor, aged 62. A heavy built man of apoplectic habit. Family history negative. Had typhoid fever at 25 and malarial fever at 28 years of age. Present disease started ten years ago with an attack which kept him in bed several weeks. It commenced with redness and swelling of the hands, on which large bullae soon appeared. A few days later the legs and feet were attacked in the same manner. Since then single disseminated blisters are constantly appearing on different parts of his

body at irregular intervals, usually about three or four times a year. The blisters always contain clear serum. Two years ago he had another severe attack of aggregated bullae, which covered face, neck, and arms. Prodromal symptoms before each attack were heat and itching of skin and a sense of gnawing in the stomach. At first a red wheal appears, on which soon a large vesicle forms; after formation of the vesicle the itching diminishes. The last attack began three weeks before I saw the patient, who was referred to me by Dr. N. T. Quales. When I saw him, chest, abdomen, and thighs were

painful. He was restless and could not sleep. Pulse and temperature were normal.

I removed the patient to the Norwegian Deaconess Hospital. Three days after his admission a new crop of clear, medium-sized bullae appeared over abdomen and lower extremities, so that practically no part of the body was spared. I kept patient on arsenic the first five days, without any effect; then gave him atropine 1-60 grain every three hours, till physiological action began to show. The vesicles then began rapidly to dry, and no new vesicles came out. For the three weeks during patient's stay at the hospital I gave him externally a bath of permanganate of potassium (sufficient to give the water a slight red color) of two hours' duration twice a day, and a zinc-sulphur paste to be applied after coming out of the bath. Under this treatment the subjective symptoms were relieved, the patient slept well, the itching disappeared, the skin soon recovered its normal condition, and the patient was discharged.

Pemphigus is an eruption characterized by the appearance of blebs. The bleb is the essential symptom, the one morphologic element around which diseases of this class are grouped. And still there is no other disease in the whole field of dermatology in which so much confusion prevails and about which opinions differ so much.

There is only one morphologic element characterizing the disease, but not one question in regard to this element, either anatomically, pathologically, or etiologically, is uniformly answered by the writers. Where is the bleb situated? Herba observed it in the superficial layer of the skin, viz., between the rete and the horny layer; Auspitz between the granular and cylindrical layers; Leloir, Brock, Riehl, Joseph Kromayer, and others observed a detachment of the entire epidermis. Yarish and Kreibich say that every layer may be detached, according to the acuteness of the exudative process. The very fact of exudation is still under discussion. The question as to whether the bleb formation is due to an inflammatory process, or is a result of degeneration due to physical or chemical causes, has not yet been definitely



Case V.—Groups of blebs close to the crusts of previous lesions, circular arrangement on arms. (Photograph taken after appearance of second crop.)

covered with large masses of crusts formed on the places of the dried-up vesicles. On the left side of the chest the crusts covered large, band-like, horizontal surfaces, running in the direction of the ribs and resembling in configuration the eruption of zoster. The arms and face were also involved, but less than the trunk. The skin under the crusts was thin and red, and in many parts moist and raw. These raw surfaces were very

answered. The presence of inflammatory exudation is denied by many writers, for the reason that we often see no inflammatory symptoms clinically. The bleb forms on a white and apparently normal skin. We see no redness or accompanying edema, and none of the inflammatory processes which accompany the formation of blebs in other exudative diseases. Auspitz constructed, therefore, his theory of acantholysis, *i. e.*, the preëxisting loss of resistance in the prickly cells, which are crushed by the advancing fluid.

Kromayer assumes an altered chemism of the tissues, giving a macerating property to the fluid, namely, a property of softening of the collagenous tissue which surrounds the fusing fibers of the columnar cells, thus detaching them from the cutis.

Yarish asserts that a violent serous exudation, the cause of which is not known, is the only factor of the bleb formation.

But where does the impulse to these processes originate, whatever their nature may be? In other words, what is the etiology of pemphigus? Here, too, there are only theories and hypotheses.

1. The theory of autointoxication. The living cells of the organisms produce leucomaines which autotoxically produce bullae analogous to the production of bullae in toxic erythemas—an assertion of a purely speculative character.

2. The parasitic theory is based on the fact that various microorganisms were found in the contents of the bullae and in the blood of patients. But against this theory stands the fact that the organisms were always found in older blebs, the fresh blebs never containing organisms; and that animal inoculation always remained without effect. One may therefore be justified in assuming that the organismal infection is secondary, coming from the outer surface of the skin into the blebs and from there into the circulation.

3. Neuropathic theory, regarding the affection as a primary angio- and tropho-neurosis. This theory is based mainly on clinical and anatomical data, and has therefore more supporters than the others. Leloir has compiled a table of different cases of various

nervous diseases, as hemiplegia, meningitis, progressive muscular atrophy, chronic myelitis, syringo-myelitis, etc., in which pemphigus occurred. In an article of Nicolsky there are about twenty-five cases of nervous affections in which thorough post-mortem investigations have been made, revealing some changes in the nervous system. But there, too, the findings were so variable in character as to make it impossible to settle upon anything definite as a cause.

Pemphigus is therefore, as yet, a purely clinical disease, the nature of which is characterized by clinical symptoms only—the appearance of bullae—but this symptom may indicate so many variable and different conditions that it is almost impossible to accept it as pathognomonic of this particular disease. Bullae appear from so many different causes and in so many other well characterized diseases, as in varicella, erysipelas, urticaria, erythema multiforme, scabies, leprosy, and syphilis; but in all of these diseases we know more or less of the pathological processes and the etiological factors. We may therefore, with Groven (*Archives of Dermatology*, vol. lv), take this lack of etiological and pathological knowledge as a basis for definition, and say pemphigus is a bullous disease, of the origin and character of which we are ignorant. But even with these limitations there is such a variety and such a multitude of clinical forms that it took a long time before all these varieties were classified into the four well known forms of pemphigus chronicus, which are: (1) Pemphigus vulgaris; (2) pemphigus foliaceus; (3) pemphigus vegetans; (4) dermatitis herpetiformis (Dühring).

In classifying Dühring's disease together with the other forms of pemphigus, I do not mean to take any exception to the recognition of this disease as a distinct type; but its symptoms, clinical course, and the whole character of the disease are so closely related to pemphigus that it is, in my opinion, impossible to entirely exclude it from that class. In cases which are not marked by striking symptoms of Dühring's disease—*i. e.*, where the lesions are uniform and the herpetiform elements are absent—even the most experi-

enced dermatologist may be in doubt as to how to classify the case, as pemphigus or as dermatitis herpetiformis.

To justify my diagnosis of the cases cited, I will state briefly the distinction between these two diseases, based on the symptomatology of dermatitis herpetiformis as given by Duhring himself, and the symptomatology of pemphigus as given by Unna.

Duhring describes his disease as having the following characteristics:

1. Polymorphism of symptoms, in which the bleb plays the least important part.
2. Herpetiform grouping, on which he lays especial stress.
3. Considerable subjective symptoms, of which pruritus is the most troublesome.
4. A long duration, from six months to twenty years, with free intervals.
5. A quite favorable general condition, and usually a favorable termination.

On the other hand, Unna (*Therapie der Gegenwart*, 1902) requires as characteristic symptoms of pemphigus:

1. Uniformity of symptoms, viz., simple detachment of the epidermis from the unchanged cutis.
2. Lack of prepemphigoid stage.
3. Bases of bullae normal or slightly reddened.
4. Lack of concentric configuration.
5. Clear serous contents.
6. Rapid healing.
7. Lack of cicatrices after healing.
8. Slight tendency to suppuration.
9. Slight subjective complaints.

Taking into consideration the above requirements of these authorities, I may state that Case I was a typical dermatitis herpetiformis (Duhring), the second a slight form, and the third a more severe form of pemphigus vulgaris, while Cases IV and V, on account of the marked prodromal stage, the more severe subjective symptoms, the quite distinct herpetiform grouping, the erythema, and the raw bases of some of the larger vesicles in one and the accompanying edema in the other, may be classified as dermatitis herpetiformis (Duhring) of the erythematous vesicular and vesico-bullous varieties.

100 State Street.

ABDOMINAL AND PELVIC OPERATIONS DURING PREGNANCY.

BY J. CLARENCE WEBSTER, M. D., CHICAGO.

Rush Medical College, Chicago.

Abdominal and pelvic operations carried out during pregnancy have until recently been recommended only as an extreme measure. There is a wide-spread tendency to shrink from interfering surgically with the pregnant woman, but this attitude for the most part is one of prejudice and not of conviction and cannot be supported by reason or modern experience. This prejudice has been transmitted from the pre-Listerian days, when surgical procedures were so often followed by death or chronic infective processes.

Emancipation from its baneful influence has been slow, largely owing to the dominant position occupied by many obstetrical teachers who, while authoritative in matters pertaining to technical obstetrics, are devoid of a special knowledge of abdominal and pelvic diseases and are not trained in surgical practice. It is easy for skilled men—midwives of this type to adopt a policy of non-interference and to gain many adherents especially when they dignify their attitude by the term "conservatism." In the practice of medicine in all its branches a thoughtful conservatism which is the outcome of knowledge and experience is always a praiseworthy qualification. When, however, it is born of timidity or ignorance, or is but the expression of a *laissez-faire* habit of mind, it is deserving only of condemnation for it is certain in many cases to cause unnecessary suffering, or, it may be loss of life. The experience of several years has convinced the writer that the judicious employment of surgical measures in various complications of gestation may diminish morbidity and risk of death in pregnant woman and may result in the saving of a number of fetuses which would be lost if other methods of treatment are carried out.

Impaction or incarceration of the retroverted gravid uterus.

In cases of pelvic incarceration of the retroverted early gravid uterus it is recommended by the great majority of obstetricians

that, if it has been found impossible to elevate the displaced organ, abortion should be induced. In two cases which have been under my care, the parents were very anxious to have children, and I obtained their consent to the performance of abdominal section for the purpose of endeavoring to replace the uterus. During the operation the patient was placed in the Trendelenberg posture and the desired purpose was satisfactorily accomplished. Afterwards a large well-curved Hodge pessary was placed in the vagina several weeks and pregnancy continued to full term.

In each of these cases pelvic adhesions existed and were divided. In one case, the left appendages were firmly adherent to surrounding structures, the tube being closed and distended. These diseased parts were removed. A loop of bowel was also adherent to the anterior (upper) surface of the uterus and bladder and was dissected away. These cases have impressed me with the necessity of insisting upon very thorough bimanual examination of the pelvis, before efforts are made to replace a retroverted gravid uterus whether incarcerated or not. One instance is known to the author in which a physician attempted to affect reposition by manual manipulations, without taking such a precaution. He succeeded but only at the price of the patient's life, for septic peritonitis developed leading rapidly to a fatal issue. The *post-mortem* examination revealed a ruptured ovarian abscess. In some cases, unfortunately, it may be impossible, even under anesthesia, to determine certain pathological conditions e. g., adhesions of the intestine to the uterus, and in all efforts at replacement it is consequently necessary to use the greatest care. If there be the slightest evidence that the tubes or ovaries have been recently infected manipulations should not be carried out. This should also be the rule when a tumor of any size complicates the displacement.

In three cases of chronic retroversion with pregnancy in which no impaction had taken place but in which firm adhesions were present, I have had the opportunity of performing abdominal section for the purpose of

freeing the uterus and its adnexa and elevating them. In each instance the round ligaments were doubled on themselves, by means of catgut suture to act temporarily in preventing the fundus from falling backwards. Also after the operation a full-curved Hodge pessary was placed in the vagina until pregnancy had well entered the fourth month. Gestation continued normally to term.

Jacobs has recently reported 11 cases of reposition by abdominal section without mortality. In 10, pregnancy continued to full term, in 1 only abortion occurred, 4 days after operation. It is therefore evident that the present obstetrical method of treating retroversion of the gravid uterus may be modified so as to diminish the percentage of abortions without an increase of danger to the mother.

The following advice seems justifiable:

1. In all cases of incarceration of the retroverted gravid uterus, in which gangrene or infection of the bladder or uterus has not occurred, and in which manipulations have failed to effect replacement, reposition by abdominal section as an alternative to the induction of abortion should be brought to the consideration of the patient and her husband.

2. In cases of retroversion of the gravid uterus whether impacted or not, in which extensive old inflammatory adhesions and cicatrizations exists, manipulations should not be carried out, and reposition by abdominal section should be considered as an alternative to emptying of the uterus.

Pregnancy complicated with chronic inflammatory changes in the tubes, ovaries and pelvic peritoneum.

In a very considerable percentage of cases pregnancy occurs in women in whom old inflammatory pelvic disease exists. In many of these gestation may continue to full term with little discomfort. In others there is more or less constant pain or distress varying in intensity, aggravated by exertion, constipation or by the pressure of clothes. In some abortion is brought about.

A large number of physicians never take these chronic conditions into consideration in their care of pregnant women. Many are inclined to consider their patients' complaints

as merely incident to their disturbed nervous condition. They may even allow the abortion habit to develop in a woman, without taking the trouble to make a thorough examination preferring to regard this condition as dependant upon some mysterious diathesis. I have checked the abortion habit in a number of women by performing abdominal section and dividing firm adhesions which prevented the normal upward elevation of the uterus in pregnancy. In one case several abortions had followed the pernicious operation of ventro-fixation. A successful pregnancy followed the procedure of freeing the fundus uteri by abdominal section.

In many cases in which abortion does not occur, the upward growth of the pregnant uterus causes a stretching or tearing of adhesions which are not very firm, and there is no doubt that these changes produce distress or pain, varying according to the extent and situation of the adhesions.

Sometimes the pain is intense and continued, leading to a deterioration of health and necessitating much rest in bed or the use of opiates. In two such cases I have operated in early pregnancy during the past year. In one the pain was due to the stretching of the upper part of the rectum and lower part of the sigmoid flexure, bent at a sharp angle and firmly adherent to the posterior surface and fundus of a three months' pregnant uterus. In the other case intense pain was caused by an old standing salpingo-ovaritis associated with peritonitic adhesions. In both cases pregnancy continued uninterruptedly to term. In some cases tubal or ovarian inflammatory swellings may burst as the result of stretching and more or less intraperitoneal hemorrhage may result, and, if the contents of the ruptured part be not absolutely sterile, infection of the peritoneum may take place.

Such a case has been reported by Fabricius. Wertheim has recently described a case in which a pyosalpinx adherent to the intestine and uterus gradually caused intestinal obstruction in a woman 4½ months pregnant. He opened the abdomen and in attempting to remove the pyosalpinx he ruptured it leading to a free escape of pus. He then removed

the entire uterus and appendages, but death followed from infection.

In the case of every pregnant woman therefore who complains of more or less constant severe pain or distress in the region of the uterus, the most thorough study of her previous health-history and present condition should be made, anesthesia being used for the latter purpose if necessary. The earlier the examination is made in pregnancy the more satisfactory it will be. In the event of finding a definite enlargement of the tube or ovary, tender to pressure, abdominal section may be advised for the purpose of removing the mass, especially if the patient gives a history of severe distress or abortion in previous pregnancies. When no definite swelling can be palpated, the presence of firm adhesions may also warrant the performance of abdominal section.

Acute infective pelvic inflammations are very rare during pregnancy. Treatment must be carried out on conservative lines. Abdominal section should be avoided in the acute stage except when there is distinct evidence of involvement of the general peritoneum. Spontaneous abortion is very apt to occur in these cases. If it does not, it may be advisable to empty the uterus in a chronic stage of the inflammation if the condition of the affected parts is such as to interfere with the satisfactory progress of pregnancy. At a later period abdominal or vaginal section may also be required. In one case in which a two months' pregnancy was complicated by an acute infective process which caused the formation of a pelvic abscess, I emptied the uterus and a month later, evacuated the pus by vaginal section. In another case of similar nature, where pregnancy was in the fourth month, a large pus collection formed posterior to the cervix and vagina making it possible to open the abscess through the posterior vaginal wall, and, fortunately, this was not followed by a miscarriage.

Intraperitoneal hemorrhage. Intraperitoneal loss of blood during pregnancy causing serious symptoms indicate the immediate performance of abdominal section in order that the cause may be determined and the vessels secured. Sometimes such a hemorrhage may

be due to the rupture of an associated ectopic gestation—sac.

Affections of the Urinary tract:

Stone in the bladder. A calculus should never be allowed to remain in the bladder of a pregnant woman. If it becomes fixed behind the pubes in labor it may obstruct the passage of the fetus, and it may be so pressed upon as to injure the bladder wall seriously. If the stone is small it may be removed through a vesical speculum. If it is large it may be removed after being crushed. If it cannot be broken it should be taken away through an incision into the bladder through the anterior vaginal wall, the opening being immediately closed.

Pyo-nephrosis. When pregnancy occurs in a woman who has an enlarged kidney containing pus, or when such a condition develops during pregnancy, it is not advisable that the gestation should be allowed to continue lest complications should arise in connection with impaired renal action, and lest a marked exacerbation of the disease should develop. Abortion should be induced. This opinion is advanced in spite of the reports of several cases in which pregnancy has continued though one kidney was useless. Some authors have advised evacuation of the pus or even removal of the diseased kidney through a lumbar incision. Twyman has reported a case in which such a mass was successfully removed the pregnancy continuing to term. It seems to the writer that neither of these procedures should be carried out. Drainage would introduce a grave risk of infection from the discharge at the time of labor. Removal of the kidney might endanger the woman from the sudden strain thrown on the other organ, especially if it were also infected. Indeed, in Twyman's case uremia occurred after the operation. Of course, successful pregnancy has been reported in a number of cases in which nephrectomy has been previously carried out, but in such a circumstance the other kidney has had time to adapt itself gradually to the new conditions.

With regard to infections of the ureter and pelvis of the kidney, unaccompanied by enlargement of the latter, it may be said that

no surgical interference with the urinary tract is indicated.

Hematoma vulvae is generally caused by a kick or fall, leading to the subcutaneous rupture of a vessel, which may or may not be varicose. When the swelling is large the skin becomes much thinned over it and infection may occur leading to suppuration. Small blood-extravasations may be absorbed if the patient be kept at rest and cold be applied to the affected area. Large ones should be incised, the clot removed and the cavity stuffed with antiseptic gauze, being allowed to shrink gradually.

Vulvar Cyst. A small Bartholinian cyst need not be interfered with until after labor. A large or growing one which may be so large as to interfere with the birth of the child should be removed if there is sufficient time to get healthy closure of the wound before labor. Otherwise, the cyst may be evacuated by puncture at the time of delivery, the wound being kept clean; at a later period the cyst may be removed.

Vulvar Abscess. This is a serious complication if it occur near the end of pregnancy since it may lead to infection in labor.

As the abscess is usually within the Bartholinian gland, it may be possible to dissect out the entire mass. The cavity should then be partially closed with sutures, the remainder being drained with antiseptic gauze. When this procedure is not possible, the pus may be evacuated and the wall thoroughly cauterized and stuffed with antiseptic gauze until all infective organisms are destroyed and healthy healing is in progress.

Vulvar Tumors. If large enough to interfere with labor, these may be removed in pregnancy or at the time of labor.

Appendicitis. This complication of pregnancy has only been described in literature within recent years. Mundé in 1893, was the first to call attention to the condition in America. In 1897 Abrahams collected 11 cases reported by American writers and added 4 others observed by himself. Since that time various other papers have appeared. In Europe Pinard, Vinard, and a few others have collected cases. It is very probable that the disease is much more frequent than is

suspected, being very often overlooked. It may occur for the first time or as a recurrent attack, and may develop during pregnancy labor, or the puerperium. According to Donoghue 80 per cent of the reported cases of acute appendicitis have occurred during the first six months of pregnancy. It is a more serious disease than in the non-pregnant state. Premature emptying of the uterus is apt to be caused, and in some cases infection of the uterus and contents may spread from the diseased appendix. The fetal death-rate is high. Labor may seriously complicate the disease especially if the appendix be adherent in the neighborhood of the uterus. Owing to the great risk both to mother and fetus, which may result from acute appendicitis in pregnancy, it is advisable that a non-pregnant woman, who has had a definite attack, should have appendectomy performed before she becomes pregnant. When an attack develops in a pregnant woman, this operation is also indicated as being less risky than non-interference.

The incision preferred by the author is an oblique one, parallel to Poupart's ligament on the right side and about 2 inches above it, which divides the anterior sheath of the right rectus and the fascia external to it for an inch or more. This incision is stretched widely, and the rectus muscle is divided vertically, the two portions being pulled apart. The peritoneal cavity is then opened and the appendix removed. The incisions in the peritoneum, rectus and fascia are closed independently with catgut. In this way a firm abdominal wall is left, the liability to rupture being very slight.

Intestinal obstruction. Rarely in labor may the intestine be interfered with so as to cause symptoms of obstruction. This may occur as a result of pressure and straining if a hernia exists in any part. It may be caused by the constriction of adhesions tightened as a result of the changed size and position of the uterus resulting from labor. Gangrene of the bowel and death may follow. Early operation is indicated. Vuic has reported a case in which intestinal trouble was caused by a large omental tumor in a woman who was three months pregnant. In remov-

ing the mass he was forced to resect $13\frac{1}{2}$ inches of small intestine. Though some peritonitis followed the operation pregnancy continued uninterrupted.

The author has recently operated on a case of hernia in a woman six months pregnant. The hernia was mesial, a short distance above the pubes, in the line of an old scar following two previous abdominal sections; there had been long continued suppuration and drainage. The hernia was a loop of twisted and adherent transverse colon. The patient had suffered greatly throughout pregnancy.

Diseases of the biliary tract. Urgent conditions only should be operated on during pregnancy e. g. impacted calculi, infective cholecystitis with accumulation of pus.

Fibromyoma uteri. In some instances pregnancy and labor may run a normal course when there are uterine fibroids. This is especially the case when the fibroids are small or few, when they are subperitoneal and placed high on the uterine body and when they do not grow rapidly. But in some cases complications, more or less serious are produced. Pressure symptoms may be present in the early months when the tumor or tumors lie within the true pelvis, especially if they are intra-ligamentous. Sometimes at this period a pedunculated sub-peritoneal growth may lie deeply in the pelvis, and in such cases the mass may become impacted. Occasionally prolapsus or retroversion of the uterus may be caused in the early months. In advanced gestation pressure symptoms may be caused by multiple or large tumors. Intra-uterine hemorrhages may be caused especially when sub-mucous tumors are present. Placenta previa is found in a larger percentage of cases than where the uterus is normal. Rarely, spontaneous thinning and rupture of the uterus may take place. Fibroids are frequently a cause of premature emptying of the uterus, though Hofmeier believes that this is not so common as is generally believed. He states that in 796 cases this complication took place only in 6.9 per cent. Nauss, however, describes it as occurring 47 times in 241 cases.

In a number of instances in advanced pregnancy death of the fetus has not been fol-

lowed by its immediate expulsion, even though the liquor amnii has escaped; decomposition of the uterine contents is likely to follow retention. Malpresentations and malpositions are frequent. Pujol finds that in 100 cases, 53.82 per cent presented by the head, 27.18 by the breech, and 19 per cent were transverse. Labor pains may be weak, irregular and ineffectual. Of great importance are the effects produced by large fibroids (which may also be present when they are not complicated by pregnancy), viz., degeneration of the heart muscle and of the renal and hepatic epithelium. The heart may also be dilated more than in normal pregnancy.

The symptoms vary considerably. In some cases the tumors cause no disturbance. When pressure is present there may be pains in the abdomen or pelvis, varicose veins, edema, weakness or pain in one or both lower extremities, edema or varicose veins in vulva, hemorrhoids.

There may be various disturbances of bowel and bladder. There may be diminution of the quantity of urine and of its solids; albuminuria and casts may be present. There may be symptoms resulting from cardiac weakness. Frequently, the patient's discomfort is aggravated on exertion. The rhythmic uterine contractions, which are normally painless are sometimes excessive and painful. Blood may escape from the uterus at times even though abortion be not induced.

The effect of pregnancy on fibroids varies. They tend to grow, the rate varying greatly; those which are interstitial increasing most rapidly. The consistence may change considerably; sometimes, a tumor may become much softer. Occasionally, there may be a complete breaking down of the central portion. Tarnier and Budin state that fibroids may become alternately harder and softer, like the uterine wall in pregnancy. It is uncertain whether this is due to activity of the muscle fibers in the tumor, or to that of the surrounding uterine muscle, the tumor remaining inert. It is doubtful if this muscular activity is found in any but soft myomata, and in more than a very slight extent.

Treatment. When there are one or more small tumors, causing no symptoms, the

case may be allowed to proceed to full time, frequent examinations being made to determine the relationships of the fibroids and their rate of growth. If in the early months a sub-peritoneal tumor lying in the pelvis is in danger of becoming impacted an effort should be made to raise it above the brim by placing the patient in the genu-pectoral position, the lower bowel and bladder having been emptied and digital pressure being made through the vagina and rectum. If this is unsuccessful after two or three attempts have been made, either abortion must be induced or an abdominal section must be performed in order that the tumor may be removed. After the latter operation there is a considerable chance that the pregnancy may continue. When a large interstitial tumor is situated in the fundus of the uterus it is possible that the pregnancy may continue without danger; in the lower portion of the uterus they may cause serious trouble in labor. Fibroids may sometimes be safely removed by myomectomy during gestation. Staveley in 1894 published an account of 33 cases. The maternal mortality was 24.25 per cent; in the cases operated upon between 1885 and 1889 it was 16.66 per cent; in those operated upon between 1889 and 1894 it was 11.75. In 30.30 per cent abortion occurred. Twenty of the cases went to full term. Duncan Emmet has reported 44 cases as occurring between 1890 and 1900 with a maternal mortality of 9 per cent.

The operation of myomectomy during pregnancy must have a very limited sphere. It is unnecessary to remove very small tumors. Large interstitial fibroids should not be removed in this way because of the risk of rupturing the stitched area in case abortion should occur or if a full-time labor should take place. Practically it need be carried out only in the case of subperitoneal fibroids which are situated low enough to be a source of danger at full time, or which have such long pedicles that they are apt to fall into the pelvis.

If an interstitial fibroid be situated near the cervix, there is risk of pelvic impaction in the early months and of obstruction in the case of labor in the late months. Abor-

tion should therefore be induced early, if it can be carried out safely and without much difficulty. Otherwise it may be advisable to perform hysterectomy by the vaginal or abdominal route. Removal by myomectomy should not be attempted in such cases, at least, until the uterus has been emptied. Where there are several tumors, large in size, rapid in growth, or causing pressure symptoms, abdominal hysterectomy should be performed. In a number of cases in advanced pregnancy a viable fetus may be removed from the uterus before the latter is excised. Sometimes the parents desire to prolong gestation as far as possible in order to ensure viability. They should always be warned that delay may increase the risk to the mother if the tumors cause much pressure, or if the heart and kidneys are not acting satisfactorily.

In opening the uterus for the removal of the fetus, it may be necessary to make an irregular incision, and bleeding may be profuse because the tumors prevent the uterine wall from retracting and contracting firmly.

Cervical fibroids are very rare. They may be usually removed per vaginam, and pregnancy may not be interrupted. Even a submucous fibroid polypus, projecting into the cervix may be sometimes removed without rupture of the amniotic membrane.

Cervical polypi—Mucous polypi may cause hemorrhage during pregnancy. They should be removed if visible. They are never large enough to cause obstruction in labor. Fibroid polypi of the cervix are very rare. If they cause hemorrhage or are large enough to obstruct the passage in labor they should be removed.

Carcinoma of the rectum. Endelmann has collected 13 reported cases of this condition. In 7 the fetus was removed by Cæsarian section. When the disease is discovered in pregnancy and is operable, the uterus should be emptied and the cancer removed afterwards. If it is inoperable, it may be advisable to allow the pregnancy to continue so that Cæsarian section may be performed and a living child obtained.

Ovarian Tumor. This condition is rare

as a complication of pregnancy. There is no ground for believing that pregnancy is in any way a causal factor in their production. They are not found more frequently in women who have been pregnant than in nulliparae. Indeed Sir J. Williams states that the tumors are proportionately far less frequent in the married than in the single. There is no proof that pregnancy accelerates their growth. In pregnancy as in the non-pregnant states some ovarian tumors grow quickly, others slowly, for unknown reasons, a great range of variations being found. Sometimes a rapidly growing tumor may increase slowly when pregnancy occurs, though generally the same rate continues. In some cases a slowly growing tumor may continue steadily before, during and after pregnancy. In other cases increase in size may occur only during a portion of the gestation period or after pregnancy. Leopold has stated that pregnancy favors malignant growth in the ovaries and Wernich says that it occasions malignant degeneration in ovarian cysts. Williams shows that there is no foundation whatever for these statements.

Twisting of the pedicle may occur in pregnancy with the various sequelae noticed in non-pregnant women. According to Williams it is found three times more frequently in the former than in the latter. It is much more likely to take place when the tumor is above the brim than when it is below. The risk of rupture of the cyst is very slightly increased by pregnancy; this accident most often occurs in connection with delivery. Abortion and premature labors are frequent though it is not possible to state from an analysis of published cases what is the exact percentage due to the tumors. It must be remembered that though an ovarian cyst complicates pregnancy, the interruption of gestation may be due to a number of other causes. Williams found that in 461 pregnancies, abortion or premature labor took place in 58; Remy found 55 in 321 cases. In Williams' cases the percentage was greater with multilocular cysts than with dermoids. It was large in cancerous ovarian growths. Suppuration in a cyst is very rare in pregnancy. It is more frequent after labor.

Hemorrhage into the cyst is also rare. Intestinal obstruction is very unusual.

Treatment. An ovarian tumor should be removed by abdominal section in pregnancy unless it be very small and above the pelvic brim. The maternal mortality is very slight after this operation and frequently pregnancy is not terminated. The older methods of dealing with these cases are responsible for an enormous death-rate. In Heilberg's statistics of 271 cases there was a maternal mortality of more than 25 per cent and fetal mortality of more than 66 per cent. In Williams' series of 461 cases the former was 25 per cent, the death-rate being as large in the easy cases as in the difficult cases; in cases requiring little or no help as in those needing the most skillful assistance. Few of the deaths occurred in pregnancy when not interfered with. One took place suddenly probably from rupture of the cyst, five resulted from suppuration of the cyst. The great majority of the deaths occurred at or after labor or in the puerperium, the largest percentage being after delivery. The chief causes of death are rupture of the cyst, septic infection, gangrene of the cyst-wall, hemorrhage, peritonitis. Such a record is sufficient to discredit the various methods employed in the past e. g., tapping the cyst, inducing abortion and labor, delivering by version, forceps and craniotomy. Removal of the cyst by abdominal section is the safest method. If it cannot be removed without performing Cæsarian section, the latter procedure should be as well carried out.

Gordon in 1894 collected 176 cases of ovariectomy in pregnancy. Of these 93.2 per cent recovered. In 69 per cent gestation continued to full term. He shows that in the most recent years the percentage of recoveries and of full time labors is even greater. The most favorable results are obtained when the operation is performed in the first four months. Of 12 cases of double ovariectomy all the women recovered but abortion occurred in 42 per cent. In 10 cases cysts of broad ligaments were removed, with 1 death and 6 abortions.

Fehling has collected 266 cases with a mortality of 5.4 per cent; in 33 per cent of

the cases the fetus was lost through abortion or premature labor.

The care of cases in which abdominal section is performed during pregnancy is much the same as in non-pregnant cases. In order to diminish the risk of abortion it is advisable to administer chloral and morphine for several days. The abdominal sutures should not be removed until the fifteenth or sixteenth day. Adhesive plaster should be kept on the abdomen for two weeks longer. A strong silk-elastic bandage should then be worn during the rest of pregnancy. The patient should be kept in bed five or six weeks. To keep her in good condition daily massage of the limbs should be carried out. Labor may be allowed to continue normally. If there be much delay in the second stage forceps may be used, to prevent undue strain on the abdominal wall.

EXSTROPHY OF BLADDER.*

BY JOHN B. MURPHY, M. D., CHICAGO.

Geo. P. American. Aged 20. Single.

Present illness. Patient states that he was born with a defect of the penis, and protrusion of bladder, and that he has never been able to control his urinary flow. There is a constant dribbling of urine with resultant irritation and excoriation of the parts. Erection, sexual desire and seminal emissions are normal. Patient complains of no other symptoms.

Previous history. Negative.

Family history. Negative.

Examination. Negative except as to genitals and adjacent parts.

1. The penis is about 2 inches long. Glans well formed except defect in superior surface. Few small erosions present.

2. The dorsum is shorter than inferior portion, consequently the organ is curved upwards and rests against the abdomen. Corpora spongiosa et cavernosa well formed. The dorsum is open and urethral canal is exposed.

3. Just above penis and in intram symphysis is a bright red granular, eroded area

*Read before the Chicago Medical Society, Feb. 3, 1904.

protruding, the size of a dollar piece. This mass vaults forward an inch or more on coughing. Above and below this erosion are small patches of normal pale mucosa. Between penis and this area are two small openings from which a clear amber urine trickles. Above and surrounding the bladder wall on all sides is an area of cicatricial tissue from

Operation. 1. Oct. 10, 1902. Ether anesthesia. A small rubber catheter was placed in each ureter. The incision was then made just at junction of the cicatricial tissue and skin, about an inch to the outer side of the junction of the bladder wall with the scar tissue. The area included in incision was dissected up in the direction of the bladder.



one-half to an inch in width. On this surface there is no hair and no erosion.

4. Umbilicus appears as a small elevated scar about 2 inches below the normal site and continuous with the scar tissue surrounding the bladder.

5. There is a diastasis of recti muscles filled in with strong fascia.

6. External inguinal rings both enlarged. No impulse on coughing.

7. Testicles slightly smaller than normal and situated in labia like elevations, close to the penile base, not in the scrotum though the latter is fairly well developed, as may be seen from the photograph.

The peritoneum was then opened and the bladder freed, with the cicatricial tissue, from its attachment to the recti and the peritoneum and the cut edges brought together and sutured in median line with continuous e. g. suture, two rows, making an inversion of the cut edges and a Lembert like approximation of the raw surfaces, thus securing a new urinary pouch or substitute bladder. The anterior sheath of rt. rectus was then incised as high as initial incision permitted. This flap was turned down and sutured with interrupted silk sutures, to one from left side to cover bladder, thus depressing the new bladder below the level of the recti or into

the abdomen. The peritoneum was then closed completely. The wound was left open, dusted with bismuth and a 1.1000 formalin wet dressing applied. The ureteral catheters were retained by suture through base of penis. Catheters attached to Y-tube.

Convalescence. Patient had temperature of 100°-102.6° for 6 days, when ureteral catheters, covered with phosphates, were removed. Large catheter inserted into bladder. Patient's condition returned to normal. Nov. 13, 1902, patient had another exacerbation of temperature followed by expulsion of a mass of mucus, pus and phosphates from bladder. Normal temperature the day following.

Second operation to cover granulating surface. Dec. 5, 1902, ether anesthesia. The granulation tissue on abdominal surface anterior to bladder wall was removed with a scalpel and the skin on either side separated from the aponeurosis of the rectus. Wedge-shaped incisions were then made on either side with angles outward. The resulting skin flaps and subcutaneous tissue were slid over raw surface and united in median line with interrupted s. w. g. sutures. Incisions made laterally were then closed transversely to form Y's with long arms outward. Horsehair sutures 1.2000 formalin wet dressing.

Recovery uneventful, with union of flaps down to a small angle of the trigonum, completely guarding the bladder. The posterior wall of bladder bulged forward inside so as to form a plug for the opening and gave a urinary continence of 4 to 6 drams. This could be expelled naturally by abdominal contraction.

Operation III. An endeavor was made to cover this small triangular area and close the base of the penis. This was done with silkworm gut suture knotted across the line of approximation. It was a failure, as the filling of the erectile tissue caused the stitches to cut.

Operation IV. Oct. 10, 1903. Bladder pouch already formed was separated from surrounding structures, at its penile attachment and edges were freshened and united. Just previous to this a silk worm gut suture was passed through edge of bladder and ends

shot on abdominal wall. A rubber tube was then fastened in the bladder for a catheter. The edges of the corpora cavernosum and spongiosum were freshened with the skin flaps and were then turned forward and united with silkworm gut sutures shot behind perforated lead plates for the entire length of penis, including the glans. The epispadias was then repaired. Bismuth subiodide with hot 1.2000 formalin wet dressing applied. Complete union excepting a 1/6 inch opening at penile base, was the result.

The organ was now closed and made a good tube to conduct the urine into a rubber urinal so the patient remained perfectly dry. I have a plan for the re-establishment of the sphincter vesicae internum and I feel it can be restored. Its nerve supply is still intact and only needs an approximation well onto the bladder wall to make it secure.

The result as it now is gives the patient relief from bladder irritation, excoriation and wetting from urine. In this operation I made excellent use of the cicatricial tissue which was on the side of the bladder. The true skin must not be inverted as it would put a hair producing tissue in the bladder and therefore be fatal to the result, as phosphates and other salts would constantly form calculi.

Ectopia vesicae is always the result of a rupture of the allantois and anterior abdominal wall, from accumulation of fluid and there is always an area of cicatricial or scar tissue around the bladder.

The abdominal fissure is not due to a failure of union but to a rupture with a separation of the pubic bones by pressure.

No effort was made to suture the pubis in this case.

HOW SHALL WE TREAT SPEECH DISORDERS?

BY JAMES M. BROWN, M. D., CHICAGO.

Assistant Professor of Laryngology, Chicago Policlinic.

Were the above question asked, it is presumably safe to say that nine out of ten persons, physicians as well as laymen, would

advise sending such cases to some widely advertised institute for stammerers, without first considering the advisability of so doing.

For the past two years I have communicated with nearly every so-called institution for the treatment of speech defects in this country, assuming the rôle of the stammerer. From replies received to my inquiries, I can almost picture these wonderful professors holding out their hands for the money, and uttering the cry, "I can cure you," which proclaims quackery in every sense of the word. One gentleman, waiting a short time after I made an inquiry, sent me at intervals three of his catalogues, and finally wrote offering to defray my expenses to the city in which he was located. Each reply is usually accompanied with numerous testimonials and occasionally, strange as it may seem, from prominent persons professionally. In nearly every instance the head of the institute has been a stammerer himself, and believes no further recommendation than his own cure necessary. Undoubtedly, some cases are benefited by these teachings, but from the observation recently made by a prominent authority upon these subjects, more harm than good has been accomplished, and he cites an instance in which two patients, recently under his observation, had before coming to him, been under treatment at one of these institutions, and they were among the worst cases he had observed in an extensive practice.

So far as I am aware, Chicago has but one stammering institute, and fortunately it is not widely advertised. At the head of this institute is a minister. The circulars are signed as "Rev., M. A." The claim is made to cure all forms of defective utterance, even cases of congenital deformity, and cleft palate. Having been a violent stammerer himself, he is in sympathy with those who are likewise afflicted. Unfortunately, however, more is necessary in the treatment of these cases than sympathy. A patient now under treatment informed me that he applied to this institute and, without any examination whatsoever, was told that the difficulty of speech was due to the tongue; he could be cured, and the fee was payable in

advance. This patient, upon examination, proved to have hypertrophic rhinitis of an exaggerated form, and an elongated uvula, causing considerable disturbance. These conditions remedied and proper vocal exercises prescribed, brought forth free and easy speech.

Institutions for the cure of disorders of speech, for the most part, have little to recommend them. They succeed in helping only those who might be helped in a simpler way, and the difficult cases are generally rendered more intractable to treatment. They are unscientific in their methods, and often practice secret methods which are practically valueless. These schools are undoubtedly purely money-making schemes, as shown by a statement recently made that within the last few years an institute of this character had made more than \$200,000 in treating these affections. Defective speech is so frequently caused by, or is a result of, some nervous disorder, or abnormality in the upper air passages, as, for instance, adenoids, and enlarged frenum lingue, hypertrophied tonsils, etc., it can be easily seen that such conditions belong properly to the competent medical practitioner.

The treatment of these cases requires time, great perseverance, and patience, and by specialists it is considered as important as the treatment of typhoid fever or other conditions for which a physician is called. The underlying cause of the defect should first be ascertained, and then removed. Then, if possible, suitable instruction can be given by a competent teacher of physical culture, but under the supervision of a physician.

34 Washington Street.

TRAINED NURSES WANT A LAW.

According to the Illinois State Association of Graduate Nurses, amateur nurses, dressed in the costume of the graduates, are imposing on persons who require such services. The state organization is working for the enactment of a statute that will provide for the registration and examination of all graduate nurses.

Sister Ignatius Feeny, of the Mercy hospital, of Chicago, the recording secretary of the association, said recently that last year the registration bill was passed, but at the last moment was vetoed by the governor.

ETIOLOGY OF ACUTE BRONCHITIS.*

BY EDSON B. FOWLER, M. D., CHICAGO.

Clinical data from 200 cases of bronchitis between the ages of 15 and 60 have been used in the preparation of this paper. With our age limitations, the "old man's bronchitis" and those of the young often associated with measles, whooping cough, etc., are excluded. It will be possible within the limits of the paper to give only the results of the study of these data.

There was a family history of tuberculosis in 10% of the cases and of pneumonia in 4%. The personal history records a previous bronchitis in 18% and chronic inflammations or malformations of the upper respiratory tract in 18% of the cases, classified as follows: Rhinitis 5½%, pharyngitis 8½%, laryngitis 1½%, tonsillitis 2½%. As the percentage of tuberculosis in the family history is not unusual, it would appear that it is of little etiological importance, but the previous attacks of bronchitis in 18% of the cases indicate a tendency to recurrence with which we must reckon. The presence of more or less chronic inflammation of the upper respiratory tract would indicate that the inflamed parts afford good cultures of bacteria which are thus ready to take part when other conditions are favorable to bronchitis.

The nationalities represented in our cases are as follows: American or American born 31%, Irish 31%, German 19%, negro 5.1%, Swede and Norwegian 5.3%, Polish 2.5%, Canadian 2%, Russian, Italian, French, English, Jew, Bohemian and Scotch each .6%. As the percentages are not materially out of proportion to the relative numerical strength of these nationalities among the poorer classes in the neighborhood of the dispensary, the question of nationality appears to be of no consequence.

The consideration of sex is of interest. It is fair to assume that there was an equal number of men and women in the community

from which our cases were drawn; yet of the 200 only 57 were women and 143 men or 28½% of women as compared with 71½% of men.

We have classified the cases into three periods of fifteen years each, namely from 15 to 30, 30 to 45, and 45 to 60 years of age. We find in the first period 34% of the cases, in the second 40% and in the third 26%. However, when we consider the question of age with reference to the sexes, we find that the percentages of the men between the three periods are as follows: 37.8%, 35.7% and 26.5% in which the middle period shows a somewhat less percentage than the first, while in women the percentages of 24.6% in the first period, 50.2% in the second and 24.6% in the last period show twice as many in the middle period as in either of the others, a fact which is most striking and calls for some explanation. It was impossible to obtain additional data as to the cause of the increase during this period, that which was given does not account for it and therefore no conclusion can be drawn.

To determine within our age limits the period of life most susceptible to the disease, it is necessary to consider the foregoing percentages as affected by the relative proportion of people whose ages lie within the periods 15 to 30, 30 to 45, and 45 to 60 years respectively. There are to every hundred of population within our limits from 15 to 30 years 28.7 individuals; from 30 to 45 years 18.7; from 45 to 60 years 9.7.

Considering these facts we find that those of period two are approximately one and one-half times as frequently affected with the disease as those of period one, while those of period three are twice as often attacked as those of period one.

The cases reviewed cover a period of seven years during which the usual variations of temperature, suitable or unsuitable to each month, probably occurred. The approximate percentages of each month were; January 9.2%, February 9.6%, March 18.2%, April 8.6%, May 4.8%, June 4.3%, July 9.1%, August 3.7%, September 4.3%, October 13.4%, November 5.3%, December 9.1%. It will be seen that March has the greatest

*Read at the meeting of the Southwestern Branch of the Cook County Medical Society, March 1, 1904.

percentage, 18.2%, and October next, 13.4%, while December, January, February, April and July have each in the neighborhood of 9%. November, May and September have less than 5½% and August but 3.7%. These percentages do not vary when the sexes are considered separately. The marked increase of cases in March and October is probably due to fluctuations in temperature, to changeable humidity and to variable winds.

The relation that occupation bears to the disease should be considered. Of the 57 women, 90% were employed in housework and 10% in various indoor occupations such as clerking, sewing, washing, etc. 72 of the 143 men were employed indoors, of which 37½% were engaged in torrid occupations such as that of firemen, glassblowers, cooks, rollingmill employes, etc.; 16½% all or part of the time were in artificially cold employments such as chill room work; 32% in what we may call dusty work such as that of metal polishers, stone cutters, iron chip-pers, woodworkers, etc.; the remaining 14% in miscellaneous occupations.

Of the 71 men employed outside, 40% were day laborers (details lacking), 12.7% drivers, 11.2% railway men, .6% each of truckmen and hostlers. The remaining 20% were divided among motormen, painters, cattledrivers, sailors, policemen, icemen, etc.

It has been stated that inside labor is more conducive to bronchitis than outside labor. In our series all of the women, 57, and half of the men, 72, worked indoors or 129 inside to 71 outside; in other words 64.5% were employed inside and 35.5% outside. As nearly as could be determined, the male population from which our cases came was equally divided as to inside and outside labor. This being the case we were dealing with a population in which the women 50% and half of the men 25% were inside workers, making 75% inside and 25% outside workers. In other words our 25% of outside workers contracted 35% of the cases of bronchitis, so that occupations outside in themselves appear to be more conducive to the affection than occupations inside. However this conclusion does not hold good when men alone are considered as they show ap-

proximately no difference in respect to inside and outside labor. In view of the fact that inside and outside labor *per se* does not appear to predispose to the disease, it would seem that the nature of the occupation regardless of whether in or outside is the important factor.

The habits of the individual are of importance. It is unfortunate that complete data were not secured in our cases with reference to the surroundings of the patient, as insufficient exercise, not enough fresh air and sunshine, improper clothing, errors of diet or excesses of diet with impaired digestion and often auto-intoxication have an important bearing upon the health and natural resistance especially of indoor workers. The condition of the bowels was noted and chronic constipation found in not more than in a like number of other cases.

As would be expected, two-thirds of all the constipation was among the women, and in the women one-half of the cases were found in the period from 30 to 45 years. Why this period of life should have as many cases of chronic constipation as one and three combined, and also why the large number of cases of constipation in this period are accompanied with an increased number of cases of bronchitis previously mentioned is not clear. It would seem that the burdens of child bearing, increased family cares and work, with insufficient fresh air and lack of agreeable outdoor exercise accounts in a measure for the constipation. That constipation in itself causes the bronchitis does not seem to the writer so probable as that both constipation and bronchitis are manifestations of impaired function of the organs of assimilation brought about by the unfavorable conditions mentioned above, and that therefore digestive disturbances and their causes are to be emphasized rather than the symptom constipation.

In our series 29 cases used liquor and 11 cigarettes or tobacco to excess. Thus it will be seen that about 20% of the cases were excessive drinkers or smokers. These excesses were all among the men or about 27.4% of their number. That others probably went to the point of excess in other

ways such as in over-work, over-eating, etc., there is no doubt and the probability of such excesses should not be forgotten, even though we cannot estimate what share they may have borne in the causation of the disease.

There were 31 or only 15½% of the cases who attributed their bronchitis to exposure. An investigation of their histories shows that 5 had had previous attacks of bronchitis, 5 were subject to some chronic throat trouble, 4 were habitually constipated, 3 drank to excess, 2 suffered from heart disease, 4 were engaged in dusty employments. Combinations of two or more of the above factors occurred in 4 of the cases. Only 8 of the remaining cases had no discoverable cause for the bronchitis other than the exposure and the bacteria common to all bronchitis cases. In view of the foregoing, simple exposure unassociated with previous attacks, excesses of any kind, throat trouble, heart disease, etc., is of much rarer occurrence than is usually stated.

In addition to the usual findings of bronchitis and the chronic inflammations or abnormalities of the upper respiratory tract already referred to, the examination revealed the presence of heart disease in 11½% of the cases, marked arteriosclerosis in 10% and emphysema was a common finding especially of the recurrent cases.

Examination of the sputum as far as was possible gave in nearly every case streptococci, staphylococci, pneumococci and various bacilli, that is, the bacteria commonly found in the upper respiratory tract at any time.

A summary of our cases shows:

1. Family history and nationality have little or no weight.
2. Men are more than twice as often attacked as are women.
3. Increasing age brings greatly increased susceptibility.
4. March and October, especially the former, have the greatest number of cases and August the fewest.
5. Outside and inside occupations *per se* are of little significance.

6. Occupations which are dusty or subject one to sudden changes of temperature, either natural or artificial, render one especially liable to the disease.

7. Women in the period from 30 to 45 with onerous family and home duties are prone to bronchitis.

8. Previous attacks or various organic diseases lower the natural immunity.

9. Irregular habits or excesses of any kind especially predispose to the disease.

10. Bacteria unaided are probably powerless.

In conclusion it may be stated that increasing age, certain months of the year, particular occupations, previous attacks, organic diseases, irregular habits or excesses of any kind are the important factors. In other words, when the vital resistance has by any one or by any combination of the foregoing conditions been driven, temporarily at least, below the normal, there may be bronchitis and probably only then do bacteria, usually harmless, become an etiological factor in the causation of the disease.

3359 Indiana ave.

New Incorporations.

The Secretary of State at Springfield licensed the following corporations:

Frank S. Betz Company, Chicago; \$750,000; manufacturing physicians' and surgeons' supplies; Frank S. Betz, Alvin F. Rohrer, and Adolphus Robertson.

Lister Medical Institute, Chicago; name changed to Dr. Joseph Lister & Co.

Dr. R. G. Haymond Remedy Company, Chicago; capital, \$25,000; manufacturing proprietary drugs and patent medicines; incorporators, E. E. Behike, M. V. Behike, H. W. Ross.

Jefferson Remedy Company, Chicago; capital, \$1,000; manufacturing proprietary medicines; incorporators, George H. Lowes, Fred H. Jackson, John E. MacLeisch.

Northwestern Sanitarium, Chicago; capital stock increased from \$2,000 to \$5,000.

Sharp & Smith, Chicago; capital, \$110,000; manufacture surgical instruments; incorporators, William N. Sharp, Jesse A. Baldwin, Henry R. Baldwin.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

APRIL, 1904.

NEXT ANNUAL SESSION, BLOOMINGTON, MAY 17, 18, 19, 1904.

OFFICERS:

PRESIDENT—CARL E. BLACK, Jacksonville.
SECRETARY—EDMUND W. WEIS, Ottawa. TREASURER—EVERETT J. BROWN, Decatur
EDITOR—GEORGE N. KREIDER, Springfield.
ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

J. W. Pettit.....Chairman
Ottawa.

E. B. Montgomery....Secretary
Quincy.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

E. M. SuttonChairman
Peoria.

R. W. HolmesSecretary
387 N. State St., Chicago.

Committee on Public Policy and
Legislation.

P. M. WoodworthChicago

L. C. TaylorSpringfield

H. C. MitchellCarbondale

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

J. W. Pettit, Ottawa.

E. M. Sutton, Peoria.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

Term Expires 1904.

(2) W. O. Ensign, Rutland.

(6) L. J. Harvey, Griggsville.

(9) J. C. Sullivan, Cairo.

Term Expires 1905.

(8) H. C. Fairbrother, E. St.
Louis.

(5) W. K. Newcomb, Cham-
paign.

(3) J. F. Percy, Galesburg.

Term Expires 1906.

(7) C. Barlow, Robinson.

(1) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

The Pres. and Sec'y. Ex-Officio.

ANNUAL MEETING AT BLOOMINGTON.

The next annual meeting of the State Society will be convened at Bloomington, May 17, 1904. In this issue will be found an invitation from the local committee of arrangements which should be read by every member of society and every reputable physician in the State. There is every indication that the meeting will be of great interest and will be well attended.

ROBERT KOCH.

The full significance of Koch's discovery of the bacillus tuberculosis is just beginning to be appreciated. Medical men have long known that the laws he laid down in 1883 are absolutely correct and the means of combating the disease are being slowly but surely communicated by them to the general public. The progress made in 20 years leads to the hope that another score of years will find this disease as nearly eradicated as is

smallpox or yellow fever, at this time. When that time comes Koch's triumph will be complete and he will certainly be known to coming generations as one of the world's greatest benefactors.

The 60th anniversary of the birth of the distinguished founder of modern bacteriology occurred on the 11th of last December. In honor of this event the Deutsche Medicinische Wochenschrift issued a number almost entirely devoted to a consideration of Koch's work and influence.

From an appreciative review of his life and labors contributed by Prof. Loeffler of Greifswald we make a few extracts. These will doubtless be of interest to our readers because of the symposium on tuberculosis to be presented at the annual meeting.

From this we learn that Koch is the direct product of the wonderful educational system which has placed Germany in the front

rank of modern science. After passing through the primary schools he entered the Georgia Augusta University at Göttingen. The year before his graduation he was awarded a prize for a thesis entitled, "On the existence of ganglioncells in the nerves of the uterus."

After graduation he served a term as assistant at Hamburg and then began practice at Langenhagen near Hanover. After a short time he moved to Rakwitz in Posen later becoming district physician at Wollstein. It was while practicing at Wollstein that he made the researches and announced the discoveries that made his name known to the world.

Some progress had been made by the researches of Pasteur, Lister, Huxer, Billroth and Klebs. A great mass of observations had been made but no one had discovered the cause of a single disease. Then came Koch. He had the peculiar gift of getting at bottom facts. He began experimenting on field mice. Six or seven years after his first experiments he published his first work entitled, "Investigations on the cause of infectious diseases." The heretofore unknown country doctor became at one bound one of the world's most famous men. The story of his experiments and progress surpasses any novel in interest. How he appeared before the professors at Breslau armed with his microscope, his white mice and staining fluids to demonstrate the truth of his discoveries. How the nation soon made a place for him in the Imperial health office and how he repaid that compliment by making the discoveries which followed. Loeffler says the remembrance of those early days when Koch in the middle, Gaffky and himself on either side, working from morning to night, almost forgetful of their meals, while Koch

revealed to their astonished gaze the wonders of the new science will ever remain a cherished possession.

As a result of the labors of these three men the weapons for the contest against the small enemies were perfected. Among these were the hanging drop, staining on the cover glass and in tissue and improved culture methods in nutrient gelatine. As a practical result of these labors we are in possession of the method of sterilizing by live steam instead of dry heat which was before universally employed. Koch's genius was recognized in a remarkable manner at the International Congress of 1881 at London. His demonstrations were made in Lister's laboratory. Pasteur voiced his appreciation by saying. "It is certainly a great advance."

But all which had been done before was only the arsenal which was to serve its purpose in discovering the particular, unknown, fearful, small enemies of man and beast and to enable us to successfully combat them. Koch now laid down the three rules which still remain necessary to prove a suspected germ. (1) Constant proof of a particular organism in every case of the disease. (2) Proof of the organism in a clean culture. (3) Ability to cause the disease by vaccination from the clean culture.

These rules were first definitely proven by his investigation of splenic fever. With true scientific spirit by one series of experiments he proved that the earth worm theory of Pasteur was wrong while by another he proved that Pasteur's contention that modified cultures of splenic fever might be used for vaccination purposes was correct.

The next great work in which Koch engaged was tuberculosis. Consideration of this portion of his labor we will leave until next month.

THE NEEDS OF THE STATE INSTITUTIONS OF ILLINOIS.

The history of the Charitable Institutions of Illinois is so intimately connected with the medical profession that no subject could be more properly considered in the columns of the official organ of the State Society. From the first inception of these philanthropic efforts up to the present time they have been the especial subjects of watchful care by the practitioners of this State. For many years great pride was taken in their efficiency and there was a time when they were equal if not superior to any other institutions in the civilized world. That was a time when superintendents were selected for scientific efficiency only and without regard to whether they could bring delegates into the county conventions to assist in perpetuating the rule of the party boss. That was a time when the outlay for wages and supplies was not subject to assessments for the purpose of building up a "machine." The editor began the study of medicine in one of these State Institutions and has been somewhat familiar with the conduct of each and every one of them for the past twenty-seven years. He has therefore no apology to offer for considering editorially the subject of the needs of the State Institutions of Illinois. On the contrary especial pride is taken in the editorials which appeared in the issues of December, January and February. Those articles were impersonal and non-partisan. They were written not by the editor but by one who knows more about the Institutions than any other. The sole object in view was to bring about an amelioration of the present conditions. They were so highly esteemed by competent judges both professional and lay as to be the subject of editorial approval in the Journal of the American Medical Association and the leading Chicago daily.

We were therefore greatly surprised to re-

ceive from the Secretary of the State Board of Public Charities the letter which will be found in our column of correspondence. It is not our intention at this time to attempt an answer to this remarkable production. Its tone is too partisan, its matter too trivial to warrant more than a passing note. It shows too much ignorance of facts and lack of appreciation of the aims of the organized medical profession to merit attention at this time. It possibly represents the ideas of a machine politician. If so we congratulate the people of the State that the institutions are as good as they are.

We hope all our members will read this remarkable communication and give us their opinions for publication in the subsequent issues of the Journal.

Correspondence.

AGENT, "THE NEEDS OF THE STATE INSTITUTIONS OF ILLINOIS."

Office of the Board of State Commissioners of Public Charities.

Springfield, Ill., March 5, 1904.

To the Editor:

It is hard to believe that the writer of the editorial under the above title, in the February number of the Illinois Medical Journal, was actuated by any sincere desire to reform the State Institutions. Until very recently there was a general disposition to exploit all charitable and educational attainments in Illinois, and to boast of Illinois' position therein. Nor is the change in attitude due to any failure of the recent administrations.

It was not until the administration of 1897 to 1901, disclosed the rottenness of the preceding one in its financial management and general administration, that the charitable institutions received any considerable attention from the general public and the press. By reason of this rottenness which pervaded every institution, the press could

not, while the facts were fresh in the minds of the people, criticize the removal of the culpable officials.

The prominence given this subject at the time, opened up a new field for attack that had heretofore escaped the attention of the anti-administration press. It made little difference to this press whether there was food for its attack or not. Its sole aim was to make the fifty thousand relatives and one hundred thousand friends of the ten thousand inmates of these institutions, believe that the inmates were deprived of the treatment and care due them, and that the administration was responsible therefor.

I can understand why the partisan press should thus stifle its conscience, but I do not understand the purpose of the editor of the Illinois Medical Journal, or his sudden interest in the charitable institutions.

Heretofore the criticism against the State institutions have been general. No specific charges have been made, except the vague one of political interference. I am glad that the last critic has at least been more specific. He has given what he assumes to be four good reasons why our insane hospitals are not keeping pace with the time.

First, that it must have internes and a superintendent and staff capable of training them. That internes were chosen in 1893-4 by severe competitive examinations held under the auspices of the State Board of Charities, and the successful competitors were assigned to the various hospitals. When the State administration changed, the interne system was summarily dropped.

Second; that at about the same time women physicians were placed in all the hospitals, but have long since gone.

Third, that there was a beginning of that training of pathologists so essential to scientific work, but that the work has fallen into decay and must be built up afresh.

Fourth, that there was a beginning of the use of women nurses in the care of men patients, which is a marked characteristic of the progressive care of insane in Europe, but of a lesser extent in this country. That this has also disappeared.

Now as to internes. I find no record of the

employment of more than one interne prior to June, 1895. M. Pattingill, the first, was employed at the Central Hospital for the Insane in March, 1894. In June, 1895, one interne was employed in each of the insane hospitals. The plan of competitive examinations was not really inaugurated until 1896, not during 1893-4 as stated, and had its trial during the period which the writer condemns.

January 22, 1896, the State Board of Charities appointed a Board of five physicians to hold examinations for internes. The hospitals agreed to take twelve. The first examination was held April 23, 1896, and nine internes were selected and assigned to the various hospitals. One year later, April 22, 1897, the question of continuing the system was again up before the Board. Dr. F. C. Winslow, Superintendent of the Illinois Central Hospital for the Insane doubted the utility of it. Dr. John B. Hamilton, Superintendent of the Illinois Northern Insane Hospital suggested that if continued, general aptitude for service should count one-half. Dr. W. G. Stearns, Superintendent of the Illinois Eastern Insane Hospital favored the system. It was decided to continue the *experiment* for one year. Dr. J. C. Corbus, Dr. John B. Hamilton and Dr. Richard Dewey, were named a Board to conduct the examinations. The experiment was discontinued at the Central and Southern Insane Hospitals in June of that year, but was continued without further suggestions by the State Board of Charities, at the Northern and Eastern Insane Hospitals. At the former until 1899, and at the latter until 1900, being finally abandoned as unsatisfactory. Why? Because graduates with few exceptions, however thorough in medical attainments, feel that they will be able to acquire a large general practice within a short time, and merely seek an internship, not for study, but as a stepping stone to something better. The best paying position, eighteen hundred dollars per year, would offer no inducement to their permanency. As a consequence, the majority take little interest in the institution. The present policy of giving deserving young physicians appointments as attendants seems preferable, since only those will accept these

positions who are interested in insanity and kindred nervous diseases.

During the continuance of the system, twenty-five internes were employed at the several hospitals at a small salary. The period of employment varied from seventeen days to two and one-half years. The average term was about ten months. Not more than five served long enough to pay for giving them any special training. Of the twenty-five, a reference to the official register will show that sixteen did not have ties or interest enough in the State to keep them here, and left the State, address unknown. Five rose to the rank of assistant physicians, but, three of the five gave only a short service in this capacity.

A reference is made elsewhere to men who have left the Illinois Eastern Hospital at Kankakee, and have succeeded in other institutions, leaving the inference that they were all forced out for political reasons, and that the hospital has in consequence suffered a decline.

Five names are mentioned, the first of which, Dr. Dewey, was undoubtedly displaced for political reasons; but this was early in 1893 and before the period of the introduction of the systems advocated by the editor. Another who was a former superintendent was discharged, by the same administration that appointed him, for extravagance and failure to maintain discipline in the hospital. Dr. Adolph Meyers, after a short term of service as pathologist at \$75 per month, left, during the same administration that appointed him, to accept a lucrative position at the head of a New York Pathological Laboratory. Later another assistant physician, included among those mentioned, resigned, because the superintendent would not appoint him chief of staff of the hospital physicians. It speaks well for our institutions that our subordinates are able to gain positions of prominence elsewhere.

Positions on the medical staff pay from seventy-five to one hundred and fifty dollars per month. The average is one hundred dollars. This salary will not hold for long the best talent and the ripest experience, yet a

high standard is sought and I believe is being maintained.

Respecting the employment of women physicians, there is room for argument. This is a question upon which alienists differ. I found during a visit to Eastern hospitals, including several in New York State, where the law requires women physicians, that the system does not invariably meet with favor. The Illinois State Board of Charities is divided on the question. The Illinois Eastern Insane hospital retained a woman physician, until two years ago, and the Illinois Western Insane hospital has from its beginning employed a graduate woman physician under the title of supervisoress and head nurse. It is purely a question of sentiment and not one of improved methods. Personally I can see no benefits to be derived from the employment of women physicians in that capacity in our hospitals.

Admitted, that original pathological research is not now a prominent feature of our hospitals. Discoveries of new causes or principles are not kept secret. We derive the full benefit of results obtained in the best equipped laboratories here and abroad, better than we would have here, except it were an independent establishment. Most of our hospitals have fairly well equipped laboratories, which enable the hospital staff to acquire training and an understanding of the cases that come under their investigation. I agree that Illinois should have a creditable pathological laboratory, but it should be a separate and independent department, and should have an able and expert pathologist at its head, and should be dependent upon the hospitals only for material for investigations.

As to how far the writer would carry the introduction of women nurses into the male wards, I am not advised. Probably he is not aware that women nurses are already employed in the care of male patients in the sick and convalescent wards in most of our hospitals. It is to be regretted that present facilities do not permit of separate wards for the care of the sick at Anna and Bartonville. There is much to recommend the employment of women nurses in the early treatment of violent and disturbed cases, although the plan

has not been generally adopted so far as I know in any of the States in America.

Finally it is claimed that our institutions can never be inviting to the most highly qualified physicians, so long as the tenure depends upon political pull. The writer thereby infers that such a condition now exists; and so reflects upon the ability of the able superintendents now occupying these positions. I do not know the editor's standard of a highly qualified physician. I might however, merely give the names of the superintendents as a guarantee of their standing. The present superintendents are Dr. J. C. Corbus, Dr. Frank S. Whitman, Dr. W. E. Taylor, Dr. H. B. Carriel, Dr. George A. Zeller, Dr. W. L. Athon. Does the editor seek to convey the impression that these men are unqualified and unfit; Dr. Corbus who graduated as a physician and served as Army Surgeon for many years and afterwards in general practice, and who was for twenty-five years a member of the State Board of Charities where he had close association with insane hospitals, Dr. Whitman who has made an enviable reputation as a hospital superintendent, and who I believe has few peers in his work, or his predecessor, Dr. John B. Hamilton, that eminent surgeon, formerly Surgeon General of the United States Public Health and Marine Hospital service, Dr. W. E. Taylor, an acknowledged expert in Neurology and for many years lecturer and member of the staff in the Hahnemann Medical College, Dr. H. B. Carriel, who served for many years as assistant physician under his father, and succeeding superintendents, being finally advanced to his present position solely on his merits, or Dr. F. C. Winslow his predecessor, prominent and well known as an alienist; or perhaps the editor would reflect upon the ability of two of the present officers of the Illinois Medical Society, who sought and filed applications for the superintendencies of two of our hospitals, within the period under discussion.

The editor recites the need of village and family care on a basis approximating that which is meeting success in France and Belgium. Whether in the development of the cottage plan at Peoria for the care of chronic

insane, the plan of family and rural care can be developed to the degree it is in France, is yet a question of time and trial. The institution is new and the State is unfortunate in the location for purely rural pursuits.

In suggesting a commission, it is not plain what the editor hopes to accomplish that would not as well be done by the State Board of Charities. Such a commission was appointed for the Dunning institution in Cook County. The dual plan of business and medical superintendent was tried and abandoned. They have gone back to the established plan of one head and have been satisfied to appoint as superintendent, a man who gained his experience and training at the Illinois Eastern Hospital during that period which the editor criticises. The writer believes that there should be but one head to an institution. If he has not sufficient ability to direct the financial and medical departments, the business interests, and look to the management, employment and discipline, he has not the needed capacity for the place. He should do all this and still be able to give that individual attention to the patients that is needful for their comfort and health.

J. Mack Tanner.

Dr. H. C. Fairbrother, Councilor of District No. 8, has sent out the following appeal to every practitioner in his territory.

EAST ST. LOUIS, ILLINOIS, March 20, 1904.

DEAR DOCTOR:—Your County Medical Society has an appeal to you now that it never had before; it is a component part of a general medical organization throughout the country.

This is an age of organization. All branches of human industry are improving their conditions by organization. Why should not the medical profession avail itself of this modern means of mutual aid and advancement?

The County Medical Society is now a part of the State Medical Society, and, in the near future, may become a part of the National Association. It is the censor for membership in both of these bodies. Standing in this relation to these great associations it has a broader field of action than ever

before. It deals now, not only with subjects of scientific and clinical and local interest, but with matters of vital importance to the welfare of the general profession. It has a voice in whatever pertains to the dignity and advancement of the practice of medicine, in the elevation of the standard of medical education, in the upholding of the better class of medical colleges, in the shutting down of diploma mills, in the suppression of quackery, and in influence upon state legislation in behalf of the profession and public health. Thus it not only protects and promotes the interest of each individual member but opens a field for action beyond mere selfish interest. It enables the physician, not only to keep abreast with his profession, but to return to it something for the benefits he has received.

This Society, also, through its system of medical journals, affords the best of all avenues for giving to the profession the results of original research, the reports of clinical cases and surgical operations and the presentations of papers upon scientific and general subjects.

Dues to the State Medical Society, paid only through the County Society, are \$1.50 a year. This includes subscription to the State Medical Journal, which should be in the hands of every physician in the state, containing, as it does, reports from all county societies and a hundred matters of interest to the profession of the state.

Dues to the County Society are fixed by each society and are usually from 50 cents to \$1.00 per year.

In view of these considerations, and many more that might be added, it appears the plain duty of every member of the profession to assist in forming and upholding his County Society.

State Items.

Dr. A. Kenaga of Herscher has removed to Kankakee.

Dr. A. L. Parks of Leland has located at Alliance, Neb.

Dr. W. B. Schurnehow of Princeton has located at 1543 Bradley Place, Chicago.

Dr. Westlake of Virden has gone to Eureka Springs, Mo., for his health.

Dr. R. A. Berry of Springfield has gone to Texas for a visit on account of his health.

Dr. John Pitt Matthews of Carlinville has returned from Oklahoma, where he visited his daughter.

Drs. L. C. Taylor and D. M. Ottis of Springfield are spending a two weeks' vacation at Hot Springs, Ark.

Dr. and Mrs. J. W. Van Derslice sail for Europe Saturday, March 26th, for a six months' stay.

Dr. J. J. Conner of Pana has been operated for appendicitis at a hospital in St. Louis. There is a strong probability of his recovery.

Dr. T. N. Rafferty of Robinson, president of "The Aesculapian Society of the Wabash Valley," has returned home, after spending a month at St. Augustine and other points in the south.

Dr. J. R. Allen of Cascade, Christian county, has no fears of Dr. Osler's "Captian of the men of death," but advertises himself as the "master of pneumonia in all its forms. Every case guaranteed."

Dr. M. G. Reynolds of Aledo has been chosen as a candidate for the next legislature by the thirty-third senatorial district. The convention at which Dr. Reynolds was nominated adopted the following resolution:

"We are in favor of appointments to positions in our state institutions being made in harmony with the spirit of civil service reform, giving party adherence and service the consideration they may properly deserve, and we condemn the practice of creating a fund by the assessment of state appointees to be used in furthering the interests of any candidate in a nominating convention."

The American Neurological Association has fixed the time of its meeting at St. Louis for September 15th, 16th and 17th; and this will be immediately followed by the sessions of the various medical departments of the Congress of Arts and Sciences, beginning September 19th.

Dr. T. J. Colbert of Jacksonville who has been house physician at the Maplewood sanitarium for the past year, has been appointed to a Presbyterian hospital in Porto Rico. He will leave about May 1, going first to New York, where he will take a special course in surgery before going to his new work. His place will be taken to Dr. A. H. Dolear.

Dr. W. A. Callender of Pekin, after being fortune's football for years, has been adjudged insane and will doubtless spend the remaining days as a ward of the state at Jacksonville. He was brought in to Pekin from the county farm, where he has been for about ten years, and tried for insanity by a jury in the county court.

Less than a quarter of a century ago Dr. Callender's "Left Liver Bitters" was deemed almost a household necessity. He was located in Peoria then and his medicine brought him fame and fortune. But ill luck befell him, and after he once started descent was rapid.

Dr. Marguerite G. Squire of Carrollton has been made defendant in a suit for \$10,000 damages, brought by Mrs. Alice Stone for alienating the affections of her husband. The plaintiff had been married to Wm. Stone 28 years and borne him sixteen children. No failure in the marriage there certainly. For twenty-six years the larks had sung and they doted on each other. Then came this woman, Dr. Squire, into their Eden, and their marriage had been on the decline and verging to failure since. It is doubted that even gaining the \$10,000 will save it. The man has thrown up the sponge as the head of the household with sixteen children and transferred his affections to the doctor who seems to be a wily widow. The morals can be extracted as needed.

The Western Alumni Association of the University and Bellevue Hospital Medical College will hold its annual banquet at the Sherman House, Chicago, April 11. Prof. Jos. D. Bryant, Professor of Surgery, and Prof. Egbert LeFevre, Secretary of the College of New York, will be present and make addresses. A cordial invitation is extended to all graduates of the school to attend. Dr. D. W. Graham is president and Dr. Willis O. Nance secretary of the association.

Hospital for Pekin.

A meeting of leading citizens was held March 7th and sites for the proposed hospital were offered by a number of persons, and the consensus of opinion was that such an institution was a necessity in this city. Another meeting will be held soon, when it is expected some decisive action will be taken.

Doctor Leads a Double Life.

"Klymer has a farm a short distance out in the country, hasn't he?"

"Yes."

"Then what is he practicing medicine in town for?"

"He has to do it to make money enough to pay what he loses by his farming."

TRADES PAY MORE THAN PROFESSIONS.

Statistics of Incomes in Professional Life Are Full of Surprises.

Public opinion in general in its ideas of the average incomes of the minister, the lawyer, the

teacher, and those of similar callings is all wrong, or nearly so. Contrary to popular belief, the average mechanic or skilled workman in many cases is better paid than a considerable proportion of professional men. While much mystery surrounds the incomes of the leading professions, still it is possible to obtain actual figures which may be accepted as authoritative.

Although it is true that in every profession a few names will occur at once which are associated with enormous salaries or fees, it is beyond question that the great majority of professional men, even after years of costly and careful preparation, are wretchedly underpaid. In gathering statistics in reference to this recompense, the incompetents have been passed by and only those who have been practicing for years and who may be said to have established reputations and practices in their communities have been taken into consideration.

Few Doctors Accumulate Wealth.

The rewards of the medical profession probably vary to a greater degree than do those of any other, but the average physician in the larger cities is commonly supposed to be moderately wealthy, while few of them are actually poor. Yet, as a matter of fact, they rarely have much property at the time of their death, and a considerable proportion are actually buried at the expense of their friends. Stories of enormous fees paid by wealthy patients are, of course, familiar, for, taken as a class, the American millionaires are the most liberal patients in the world with their physicians. All the doctors in the United States who earn professionally more than \$100,000 annually could be counted on the fingers, however, and it is likewise probable that not more than the digits of one hand would be necessary to enumerate those in Chicago who earn more than \$50,000 each year. Perhaps a score take in one-half the latter amount and upward of 100 enjoy incomes of more than \$10,000.

These figures, however, refer to the men who are obviously at the head of their profession. The average income of a Chicago physician is far under these figures. From statistics gathered recently, after considerable correspondence, a prominent physician gives it as his opinion that the average income is not in excess of \$2,000 a year. There are many, of course, who collect much less, so that the figure is, if anything, a liberal average.

County and District Societies.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m.
Membership 73.

Officers.

President B. B. Griffith, Springfield
Vice President S. E. Munson, Springfield
Secretary-Treasurer C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The society held a very interesting and exceptionally well attended monthly meeting on Monday, March 14, 1904, at 8: 30 p. m. in the

supervisor's room. President B. B. Griffith in the chair. Minutes of last meeting read and approved. Bills read and ordered paid. The application of T. W. Metz for membership was read. Dr. Kreider made motion that rules be suspended and the secretary be instructed to cast a ballot for Dr. Metz; motion carried. Literary exercises:

Etiology and Clinical Aspects of Tuberculosis, by Dr. L. C. Taylor. He spoke of Koch's methods of procedure to prove that a given

disease was due to a certain micro-organism and of the discovery of the tubercle bacillus by Koch in 1882. The modes of entrance of this tubercle bacillus into the system through the skin, mucous membranes, and any of the air passages or alimentary tract, with or without any visible abrasion. Of the finding of the tubercle bacillus in the air of rooms inhabited by tuberculous patients, in milk and other animal foods, in milk of nursing mothers, and in the new born, when only the mother or father was affected, he thinks the disease is transmissible to offspring from parents. Even if this be true, it is also a fact that the vast majority of cases are acquired later in life and but few can be traced directly to heredity. It is the susceptibility to and not the disease that is transmitted. Having found a favorable soil they may develop locally in the skin as in lupus, in the mucous membranes of the mouth, tonsils or bronchi or in the intestinal tract, forming tubercular ulcers, or from any of these points involve the lymphatics, and from there enter directly into the venous circulation to the right heart and find a most favorable soil in the lungs. He also mentioned Koch's startling the medical world by denying the identity of human and bovine tuberculosis.

Clinical History—When a patient presents himself for the first time it is usually without a suspicion of his affliction. Possibly a slight loss of weight, a lack of physical endurance, probably a slight cough, with or without any appreciable expectoration, may be all of the subjective signs. Upon examination there may be no physical signs sufficiently marked to make a diagnosis. A persistent rapid pulse, however, with a slight elevation of temperature found upon repeated examinations should always excite our suspicions, that we may have to deal with an incipient tuberculosis. After dullness and crepitant rates are present with any of the above signs, the diagnosis is easy; prior to this, however, other conditions may give rise to the symptoms above referred to. One form of tuberculosis, very insidious in its course, is that involving the pleura. Some of these cases present so few premonitory symptoms that the first indication of trouble is caused by difficulty in breathing, produced by pressure of the lungs by the accumulating fluid in pleural cavity.

An interesting discussion was participated in by all members present. Dr. Stericker opened the discussion and covered the subject very thoroughly, but dwelling particularly upon pleuritic effusion, fever pulse and heart symptoms. Dr. Buck spoke of the importance of **Tubercular History in Life Insurance**. Dr. Kelly dwelt upon the rapid pulse and persistent fever. Dr. Munson thinks bovine tuberculosis transmissible to human. Dr. Spicer on **Tuberculosis in Children**. Dr. Metz on **Laryngeal Murmur** as an early symptom. Dr. Hagler says you cannot depend upon the microscope for diagnosis; when diagnosis is made by microscope, it is then too late in the disease to do much good. He thinks the fever curve of great importance and should be taken at least three times a day for a long period of time.

Dr. Brittin reported a case in which he made a diagnosis of tuberculosis from the symptoms and physical signs, although the microscope on repeated examinations, failed to confirm his diagnosis until late in the disease. Discussion was closed by essayist. Color of tubercular effusion nearly always tinged by blood. More tubercle bacilli in digestive tract of children brought up on cow's milk. Necessity of thorough examination always before using the microscope. Dr. Kreider suggested that secretary give to the press an outline of the work of the society. Adjourned.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 70.

Officers.

President L. A. McFadden
First Vice President J. C. Roberts
Second Vice President B. M. Stephenson
Treasurer Jeanette Wallace
Secretary S. M. Miller
Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.

The Peoria City Medical Society convened in the Observatory building at 8 p. m. on Tuesday, February 2d. L. A. McFadden presiding.

R. A. Hanna.—Epilepsy and Its Management.

Epilepsy is so commonly found associated with mental and physical defects that its presence is a presumptive evidence of degeneracy. The condition of the epileptic is a pitiable one; afflicted with an incurable disease, which tends to terminate in dementia, insanity or imbecility, unfitted for association with others, and debarred from entering into fair competition in any field of human endeavor, the epileptic is an exile in the community.

Little progress has been made in our knowledge of the disease, in regard to etiology, pathology or treatment until the last two decades. The medical treatment is nil. Most of these individuals are objects of charity, either public or private. They crowd the almshouses and insane asylums. Their segregation in state institutions devoted to their care affords the best plan for their protection and welfare. For those mentally and physically sound, the colony plan gives the best results. Here, screened from the curious gaze of the world, no longer sensitive as to their malady, enjoying the boon of social intercourse with their fellows, and the peace of mind engendered by having a useful occupation, and by being self-supporting, their lot is made not only endurable but happy.

Under such a plan, the number of seizures is greatly diminished for each individual, and according to the reports of Craig Colony, actual cures are obtained in from 7 to 10 per cent of the cases.

The first step in establishing any great public charity, is to educate the people to understand the necessity and to appreciate the benefits to be derived. In other words, to create a favorable public sentiment.

Briefly the plan should be, first, a law of commitment such as controls our care of the insane; second, the establishment of institutions and colonies; third, the congregation of

the epileptics and their segregation into classes, i. e. according to mental status; fourth, the prevention of their propagation.

Their number would be materially lessened in time, and their condition ameliorated.

A committee consisting of O. J. Roskoten, C. U. Collins and S. M. Miller, chairman, was appointed to consider the advisability of founding a medical library, and to take action necessary to found such a library.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.

Membership 40.

Officers.

President.....F. P. Norbury, Jacksonville
Vice-President.....T. W. Hairgrove, Jacksonville
Secretary.....D. W. Reid, Jacksonville

The regular monthly meeting was held March 10 at the Library. Vice-President Hairgrove in the chair.

A. H. Kenniebrew was elected a member.

Dr. Crouch reported in detail a series of cases of **facial erysipelas** at the Central Hospital for the Insane, following influenza. Being isolated in nearly every case, they were not communicated from one to the other, but occurred nearly simultaneously in different wards of the institution. All the cases began in the nose, were in feeble patients, over 50 years of age, and followed influenza. One death.

Dr. Reid reported a case of birth at term of a **living child after 5 miscarriages** in six years by a syphilitic mother. During the last six months the mother had been kept upon iodides and mercury.

Another peculiarity of this case was that the water broke three months before the birth of the child, there being absolutely no amniotic fluid at birth.

Dr. Milligan reported a case of **talipes** cured by the parents by massage under the direction of the physician.

Dr. Day reported a case of **epistaxis** which yielded only to repeated pluggings of the nares together with the use, local and systemic of adrenalin.

Dr. Black reported a case of laparotomy for **appendicitis** in which it was found that the appendicitis was merely a complication of a large haematoma of the right tube, the latter caused by rupture from a supposed ectopic pregnancy. Result, recovery.

Dr. Hairgrove reported a case of **appendicitis in a child of 8**, delayed operation and abdomen filled with pus. Died. The speaker emphasized the need of early operation in most cases of appendicitis, as there is no possibility of determining what cases may prove fatal if operation is delayed.

Dr. Bowe reported a case of **appendicitis** where the recommendation of the surgeon to operate was overruled by the family physician and patient was allowed to die.

A special meeting of the physicians and lawyers of Morgan county was held March 18, at the Dunlap House to partake of a banquet and listen to an address by Judge Owen P.

Thompson on **Forensic Medicine**. Dr. F. P. Norbury as president of the Morgan County Medical Society was master of ceremonies and there were present 40 members of the two professions. The event was the first of its kind in the city and was thoroughly enjoyable.

CHAMPAIGN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Champaign at the Hotel Beardsley the third Thursday of each month. Membership 60.

Officers.

President.....S. S. Salisbury, Champaign
Vice-President.....W. L. Gray, Champaign
Secretary and Treasurer.....Jas. S. Mason, Rantoul
Censors.....C. H. Spears, H. E. Cushing,
Champaign, and J. A. Hoffman, Pesotum.

Champaign County Medical Society met at 2:30 p. m.; S. S. Salisbury, President, in the chair. In the absence of the secretary Chas. B. Johnson acted.

Minutes of last meeting were read and approved, after which A. J. Foelsch of Bondville, read an interesting and comprehensive paper on **Pneumonia in children**. The paper was discussed by nearly all the members present. Dr. Howard is fully convinced that pneumonia is an infectious disease, and acting on this theory a germicide is indicated. For this purpose he has found inhalations of Formaldehyde very efficacious. Dr. Newcomb thinks we have no specific for pneumonia, but must depend mainly on eliminants and supporting measures. Dr. Dillon believes active catharsis a most important aid in this disease. Dr. Mandeville has great faith in small doses of tartaremetic. Dr. Johnson believes that Champaign County is a locality, that is fortunate on account of the relatively small number of pneumonia cases within its limits. S. S. Salisbury spoke of free blood-letting being one of the main means of treatment in the early days of his practice, and feels sure he had seen great relief afforded by this measure, and often wonders if the profession is not making a mistake in ignoring this remedy so completely in late years.

Among those in attendance were Drs. Salisbury, Howard, J. E. White, Cushing, Foelsch, Wall, Mandeville, Sale, Dillon, Schowengerdt, Cooper, Miner, Lion, Newcomb, Powers, Ruby, Ryerson, and Johnson.

A resolution was offered favoring a general banquet at the date of the April meeting. On motion Dr. Mandeville was appointed a committee of one to select assistants and organize a committee of Arrangements for said banquet.

EAST ST. LOUIS MEDICAL SOCIETY.

Regular meetings are held every two weeks. Membership 30.

Officers.

President.....C. F. Whitmer
Secretary.....C. W. Lillie
Treasurer.....W. H. McLean

The East St. Louis Medical Society met in regular session on March 7, 1904, with C. F. Whitmer, President, in the chair, and C. W. Lillie, Secretary; and Housh, Campbell, Hagarty, Bottom, Thompson, Wiggins, Sasvil, Adams, Zimmermann, Harvey S. Smith, W. S. Wiatt and Stanton, members present.

Minutes of last meeting read and approved.

Subject of prescribing by the druggists was brought up and discussed by Lillie, Sasvil, Adams, Hagarty and Wiggins; and on motion W. S. Wiatt was appointed a committee to prepare a suitable resolution bearing upon the subject, clearly defining the position of the society in this matter.

The resolution offered by Dr. Rendleman at the last meeting was, on motion unanimously adopted. It reads as follows:

Resolved, That the East St. Louis Medical Society request the reporters of this city to omit the names of any doctors who may be called in emergency cases, or who may perform operations.

Dr. Adams related the circumstances leading to the prosecution of Dr. Sasvil for an alleged assault on a patient, and the damage case now pending against him, and after the circumstances were fully understood the following resolution was unanimously adopted:

Resolved, That after hearing the details of the recent case against Dr. E. M. Sasvil for an alleged assault, and the damage case against him on account of the said alleged assault, the East St. Louis Medical Society expresses its confidence in Dr. Sasvil as an honorable gentleman, a competent, careful, and conscientious physician; that the Society believes the prosecution of the said cases to be wholly unwarranted; and that the Society tenders him its generous support in defense of his reputation.

The offense charged in the above cases was the examination of a sick woman without her consent although the husband and mother of the patient was present, the husband having brought the doctor into the house for the purpose of examining and treating his wife, but as there had been a domestic infelicity in the family the mother objected to any interference and Dr. Sasvil retired. Upon this flimsy pretext the cases were brought.

On motion a committee was appointed to draft resolutions concerning the financial interests of the members of the Society, and their protection from deadbeats. Wiggins, Adams, and Campbell were appointed with instructions to report at the next meeting.

A committee, consisting of Drs. Housh, Thompson and Bottom presented the following resolutions regarding the death of Dr. J. G. Battell:

Resolved, That we, the East St. Louis Medical Society, realize that we have lost a worthy and efficient member; and the public a good citizen, a true and faithful friend. Be it further

Resolved, That we extend our sympathy and condolence to the bereaved relatives and many friends; and be it also

Resolved, That a copy of these resolutions be spread upon the minutes of our Society, and that a copy be sent to the local press, and one to the relatives of our esteemed brother.

On motion the resolutions were unanimously adopted.

The East St. Louis Medical Society met in regular session on March 21, 1904, at 8:30 p. m., with C. F. Whitmer, president in the chair,

and C. W. Lillie secretary. The following members were also present: Fairbrother, Thompson, Stanton, Voris, Wiggins, State, Rendleman, Harvey S. Smith and Adams.

Minutes of last meeting were read and approved. The resolutions adopted at the last meeting regarding the case of Dr. Sasvil, were read and Dr. Wiggins moved that Dr. Sasvil be presented with a copy of the explanation of the details which led to the bringing of the suit. The motion prevailed.

The secretary was instructed to notify the chairman of the several committees that they should be ready to report at the next meeting.

The bill of the Scott Printing Company for printing cards and circulars was presented and on motion, allowed.

Dr. Fairbrother read a paper on the **Effects of Open Air on Wounds.**

Discussion of Dr. Fairbrother's paper: Dr. Wiggins says Dr. Fairbrother's statements are very interesting. They apply to healing by first intention. Would ask Dr. Fairbrother if he would treat fresh wounds in that way. Listerism taught us twenty years ago to saturate the air of the operating field with a spray of carbolic acid, but the idea is fallacious, as any antiseptic which will cause the death of germs would also cause the death of the tissue. Listerism has given way to asepticism.

Dr. Rendleman: The subject is an old one and yet it is always new. In one sense all our dressings are open air dressings. The gauze and cotton acting as a filter for the air in the same manner as we filter the air in the culture tubes in our bacteriological laboratories.

Adams: Inquires if Dr. Fairbrother means that wounds should be absolutely open or protected by gauze.

Thompson: Unpolluted air is of benefit in the healing of wounds, but in practice we find it extremely difficult to get unpolluted air in contact with wounds since the bedding, clothing and other articles are all bearers of infection.

State thinks it a good idea to follow nature. Dressings in contact with open wounds appear to absorb the protective coat which Nature provides and thus hinder its repair.

Lillie: The union of wounds by first intention has long been recognized, John Hunter, being one of the first to call attention of healing. Later on Sir James Paget studied this matter and gave a detailed account of the process, and as no effort was made in his day to exclude the air from wounds we find that the beneficial influence of air was recognized. I believe that it is not so much the exclusion of the air in the cases referred to by Dr. Fairbrother as it is the prevention of the escape of the waste products which gives the unfavorable results.

Whitmer expresses the opinion that air exerts a favorable influence, and that the protective film which covers recent wounds is due to the presence of large numbers of white blood cells, which, with the serum pass through the walls of the capillaries, and that air is necessary for their perfect adaptation to their new uses.

CRAWFORD COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Thursday in each month. Membership 24.

Officers.

President J. W. Kirk, Oblong
Vice President C. E. Price, Eaton
Secretary H. N. Rafferty, Robinson
Treasurer C. H. Voorheis, Hutsonville
Board of Censors: W. H. Hoskins, Trimble; G. W. Fuller, Palestine.

The Crawford County Medical Society met in regular session at the office of Dr. C. Barlow, in Robinson, Thursday, March 10, 1904. The following members were present: Barlow, Dunham, Firebaugh, Jones, Price, Voorheis and H. N. Rafferty.

H. F. Jones read the first paper of the afternoon, his subject being "The Complications and Sequelae of Scarlatina; their Prophylaxis and Treatment." This paper proved to be a very thorough consideration of the subject, and that it was of much interest and importance was shown by the general discussion which followed. Voorheis mentioned gangrene of the throat and neck as a fatal complication in one of his cases, and arthritis as a very common sequel of the cases which had come under his observation.

Barlow had used antiphlogistine for the adenitis in one case with very good results. Dunham emphasized the importance of a liquid diet and rest in bed, in the prevention of nephritis; and also remind us that we might have the desquamative form of nephritis, with no albumin in the urine for the first few days. Firebaugh had never seen any results from antiphlogistine under any circumstances. He believed it important not to get the skin blistered or broken over a swollen neck, as it seemed to favor gangrene. Price mentioned a case in which scarification of the tonsils had yielded good results. H. N. Rafferty emphasized the importance of early incision of the drum membrane in cases of purulent otitis media, followed by frequent irrigation, thus avoiding destruction of the membrane, disease of the ossicles, and more or less permanent deafness. He also reported an instance of contagion through a third person, who did not have the disease. In closing the discussion, Dr. Jones mentioned the importance of getting the laity to understand that the mild cases were true Scarlatina, and not "scarlet rash" etc.

C. H. Voorheis read the second paper of the afternoon, his subject being "The Etiology, Classification, and Treatment of Hemorrhoids." This proved to be an exceedingly clear and comprehensive article, on a very practical subject. The author mentioned the ancient Biblical references to this troublesome affection, but was inclined to believe that the wrath of God played a very slight role in the etiology, at present.

In the general discussion which followed, the treatment by injection was strongly condemned, while nearly all endorsed the operation of excision, with ligature, and that with clamp and cautery, for internal piles; and free incision, with turning out of the clot, in inflamed external piles.

The discussion and acceptance of the revised fee-bill was postponed until the May

meeting, when we should expect a fuller attendance.

The next regular meeting of the society will be held in Robinson, at the office of Dr. Frank Dunham, May 12, 1904.

VERMILION COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Monday of each month in the city hall, Danville, at 8:30 p. m. Membership 60.

Officers.

President Jos. Fairhall, Danville
Vice President F. N. Cloyd, Westville
Sec'y and Treas. E. E. Clark, Danville
Board of Censors: H. F. Becker, E. A. Johnston, W. A. Cochran.
Committee on Violations of the Medical Practice Act: E. E. Clark, S. L. Landauer, S. C. Glidden.

Vermilion County Medical Society met Monday evening, March 14th, in the city hall. Called to order by the President Jos. Fairhall.

E. B. Cooley read a paper on Dermatitits Medicamentosa which showed a clear understanding of the subject. The discussion was led by R. A. Cloyd of Catlin and closed by the essayist.

W. A. Lottman of Oakwood reported an obstetrical case which brought out a general discussion.

A. M. Miller acted as secretary in the absence of E. E. Clark.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President F. C. Vandervoort, Bloomington
Secretary A. F. Kaeser, Bloomington

The McLean County Medical Society met at the city hall, Bloomington, March 3d. F. C. Vandervoort the president in the chair.

J. Whitefield Smith the essayist, read a paper on **Defect of Vision and Hearing in the Public Schools.** The doctor's attention was called to this subject by a letter he received from the State Board of Health stating the fact that in Chicago 32 per cent of the school boys and 37 per cent of the school girls showed defects of vision, and that this percentage increased with the length of time the pupil had attended school. In a later letter the board gave the outline of a plan which had been adopted in Chicago which required the teachers to make certain examinations of the pupils at stated times. If we remember that 90 per cent of all sense perceptions are obtained through the eyes we cannot be too careful in guarding against defects in vision. The doctor took up the different kinds of defective vision with the consequences to the pupils **hypermetropia**. This class of patients shows a lack of perception of details. Then they have headaches, neuralgic pains and sometimes chorea. Such conditions are only relieved, never cured by medicines taken internally.

Myopia. This condition is generally acquired—it very often is progressive—and is more commonly found in the high school rather than in the grades. Myops are too likely to spend their leisure hours reading, because of the fact that their defective vision puts them at a disadvant-

age in outdoor sports, and so their health is often poor. In the school room they are often unable to see the work on the board, while near objects they perceive very distinctly because their image of an object is larger than in the normal eye. This leads the teacher to believe that the pupil's vision is good. These patients should avoid needle and all fancy work.

Ear Troubles. About 75 per cent of these are due to a catarrhal inflammation of the middle ear, very often following a suppurative process. If repeated the ossicles may become affected and this may lead to an offensive odor from the ear which causes the patient to be shunned by his mates. These pupils are often believed to be mentally incapable when in fact it is one of these two organs which are at fault.

After a thorough discussion of the paper the society proceeded to its business.

R. A. Noble, J. W. Fulwiler and J. Whitefield Smith were appointed on a committee for a banquet which is to be given at the 50th anniversary of the organization of the society.

The president stated that O. B. Will of Peoria will be one of the speakers on that occasion.

The Society adjourned to meet at 6:30 P. M. at the Illinois Hotel, April 7th.

MASON COUNTY MEDICAL SOCIETY.

Regular meetings held monthly in the various towns of the county. Membership 10.

Officers.

President.....J. L. Dieffenbacher, Havana
Secretary.....H. H. Hanly, Havana

At the last quarterly meeting, held March 11, the following papers were read:

Obstetrical Antisepsis.

C. C. Hill: The term Obstetrical Antisepsis, or against putrefaction, or the use of antiseptic measures or remedies in Obstetrics.

There was once a man who said that he had no fear of drowning, because he had made a careful study of the article on swimming in the encyclopedia. When his boat capsized and he found himself in the water his astonishment and chagrin at his helplessness were exceeded only by the delight with which he welcomed the timely arrival of an expert swimmer who mercifully dragged him ashore. Out of a great number of physicians who graduate every year comparatively few have received any practical training in the art of Obstetrics, except as they have witnessed five or six deliveries in a well appointed Maternity Hospital, and not one in a hundred has had the actual management of a case throughout the pregnancy, labor and puerperium. While Hospital training lays the best and most substantial foundation for future success in medicine and surgery, it cannot from the very nature of the case do more than qualify a student in hospital methods; and these are of necessity so vastly different from the methods of the practicing physician, that there can be little comparison between them. Nor can books written from the hospital point of view, giving hospital statistics and hospital results do otherwise than impart to their readers the hospital side of the question, so that whether or not a student has served as an intern in a Lying-in Institution, he usually views the matter at the

beginning of his practice in the same light. Let him know his theory never so well it will serve him to little purpose, until he is able to apply it properly, and his ability can only come of actual experience and a thorough knowledge of the conditions that are encountered in private practice.

"Familiarity breeds contempt," and normal deliveries are such commonplace, every day affairs, that many physicians will make more elaborate preparations for the amputation of a toe than for the management of an ordinary obstetrical case. Better let the toe be chopped off with an axe, the bone allowed to slough out and the wound heal by granulation, than subject one woman to even a mild puerperal infection that will transform her from a strong, healthy being, to a confirmed invalid, a burden to herself, her husband, and her family.

No where do we find more striking proofs of the value of the antiseptic system than is shown in the diminished puerperal mortality and morbidity in hospitals since the introduction of antisepsis into obstetric practice. Before the advent of Listerism (1866) the usual death rate from child bed fever in Lying-in Hospitals, was from 2 to 10 per cent, and in so-called epidemics this limit was often exceeded. Under the antiseptic methods the mortality from sepsis in well managed institutions, is less than 1 in 200, and the morbidity does not exceed 10 per cent. A few examples will suffice to show what is possible under the present perfected system of aseptic obstetrics. Professors Groth, Netzel and Sonders, of Stockholm, report 18,000 births under their direction (1880-89) with one death in 344, or .29 per cent. In Copenhagen (1888-89) 1,200 hospital deliveries the death rate was .24 per cent. The Boston Lying-in hospital (1891) recorded 550 deliveries with no death from septic causes. Insurance reports show that of all deaths in women between 19 and 29 years of age, more than 18 per cent, and between 29 and 39 years of age, more than 13 per cent are due to puerperal causes. This indicates a mortality that is truly appalling, especially when one reflects that it falls upon women in the prime of life and usefulness, and is the result of a preventable disease. Yet the disastrous effects of puerperal infection are not represented by the mortality alone. Thousands of invalid mothers owe their impaired health to the milder grades of sepsis in childbed. No stronger evidence could be offered than is afforded by the foregoing facts of the need for improvement in the obstetric methods of the general practitioner.

Obstetric antisepsis dates from 1847. To Ignatius Semmelweis, a young Hungarian, who at the time held the position of assistant in the lying-in department of the Vienna General Hospital, belongs the credit of first demonstrating its efficiency. The obstetric service at the hospital was divided into two sections, in one of which instruction was given to mid-wives, in the other the medical students. It was with the latter that Semmelweis was connected. The women were delivered by students, who for a considerable portion of their time were occupied with the operations of the dead-house and dissecting room. They took no precautions to

cleanse themselves, except to wash their hands with soap and water. The death rate was excessive, reaching nearly 10 per cent of the women delivered. Semmelweis bent his energies to discover the cause. He was struck with the fact that in the mid-wives' clinic the death rate was little more than 3 in every hundred women confined.

It appeared too, that prolonged labors in the students clinic, were almost invariably followed by death, while in the mid-wives' section, the length of the labor made little difference in the mortality.

During this time one of his associates, Professor Kolletschka, lost his life by a dissection wound, the symptoms of the professor's illness being identical to those of the fatal malady which was raging in his own wards. It dawned upon him that the cause of the deadly scourge was to be found in the infected hands of the students who attended the labors. In May, 1847, all students who attended the labors were compelled to wash their hands in Chlorine water, or in a solution of Chlorinated lime, and were restricted in the number of examinations. The result was an immediate fall in the death rate. In six months it had dropped from 9 or 10, to 3 per hundred, and the second year it did not exceed 1.5 per cent.

No proof could be clearer of the correctness of his views, yet they were bitterly opposed by the profession.

He was ridiculed and despised and finally died insane, a victim of continued persecution.

A ready means of sterilizing most instruments is by boiling them 10 minutes in water. The addition of 2 per cent of washing soda, C P to the water helps to remove greasy matter and prevents the instruments from rusting. For the disinfection of the hands the following method is recommended: Clean the nails dry. Scrub the hands and forearms for not less than 3 minutes with the hand brush with soap and water as hot as can be borne. Special care must be taken in brushing the nails and finger tips and the water should be changed two or three times. Soak well in alcohol, and before it evaporates immerse for three minutes in hot solution of mercuric chloride 1 to 1,000.

Or the use of the permanganate method.

A lying-in chamber should be of good size, well ventilated and well lighted both by day and night. The puerperal chamber, if possible, should have a sunny exposure, except when labor occurs during the hot summer months. At such times the north or east room is preferable. If the room has been occupied recently by a patient suffering from one of the contagious or infectious diseases, it must be condemned if possible and another selected, or if such an arrangement is out of the question it should be thoroughly disinfected and repainted, repapered, and refurbished throughout. Unnecessary curtains, hangings, furniture, etc., should be removed, but enough should be left to leave the room comfortable and cheerful. As far as the obstetrician is concerned, the only necessary furniture will be a bed or cot, preferably the latter, a small, low table, a chair and a slop pail. When convenient, it is far better to have the labor take place on a cot or large couch. A

cot or bed, whichever is used, should be supported by boards, as this will give a much firmer surface for the patient to lie on and will prevent the discharges from collecting in a pool under her buttocks.

I strongly advise the Kelly pad and rubber sheet in obstetrics. The obstetrician must, in justice to his patient, be free from the pursuit of any avocation requiring his prolonged absence from his office, and he should have a standing arrangement with a suitably qualified professional neighbor to attend promptly to his work when he is unavoidably prevented from doing so himself. He must be particularly careful in the matter of personal cleanliness, giving special attention to the care of his hands, fingernails, beard and hair. Clothing that has been worn to a contagious or infectious case, must never find its way into the lying-in chamber.

Preparations for Labor.

It is a very good plan to give the patient an enema before labor. After this the patient's genitals should be bathed with a solution of lysol (1½ drams to pint) made with boiled water and the vulva covered with a clean sanitary pad, held in place by a band around the waist. There should be as few examinations made during labor as possible. It should be a standing rule that once a pad is removed it must invariably be replaced by a fresh one. Before changing the pads or bathing the patient's genitals, the nurse must use the utmost precaution in reference to asepsis. The patient's nipples should be bathed with a saturated solution of boracic acid before and after each nursing.

The Infant.

The baby's eyes and mouth should be bathed at least once a day with boracic acid solution. The physician should perform, or personally superintend the dressing of the cord, of which I recommend the use of alcohol and plain sterile gauze and cotton.

Professional Harmony.

W. H. Hall: In part two, paragraph one, of his Organon, Hahneman says: "The physician's highest and only calling is to restore health to the sick, which is called healing." In the next paragraph: "The highest aim of healing is the speedy, gentle and permanent restitution of health, in the shortest, most reliable and safest manner, according to clearly intelligible reasons." Taking this as our text, uniting on the one broad aim of combating disease, alleviating suffering and avoiding the reefs and whirlpools which wreck the ship of concord, I can see no reason why honest physicians of professional integrity should not work together in harmony. The scientists have told us: "There are no two blades of grass exactly alike, for the reason that they are not fed from the same atom of soil, bathed in the same ray of sunlight or moistened by the same dew drop; neither are there any two individuals alike, because their surroundings are not the same." We will also say that as the physical pictures of men vary, so will the mental, and no two physicians will think exactly alike on all subjects and at all times, because their experiences are not wholly identical.

We are here however, to exchange ideas and each member can assimilate as much from the others as suits his choice of mental pabulum.

Physicians are much nearer together in methods of practice today than at any time since Dr. Samuel Hahneman launched his theory of *Similia Similibus Curantur*, and Dr. Wooster Beach published his substitute practice, which was by agreement named Eclectic. Medical practice was very crude the latter part of the 18th Century and the early part of the 19th, when Hahneman received his inspiration and at the time when Thompson grasped the bulldog by the ears and said: "Heat is life and cold is death and three angles are required to make a triangle."

His angles being chiefly composed of emetics, stimulants and steam. Nature always has its antitheses and Dr. Hahneman, a finely educated man, soon swung to what he termed "The spirit like medicinal powers of crude substances or, the dynamic effect of highly diluted medicines." Later physicians not being endowed with the magnetic force of their master, gradually lost faith in the subtle "*potencies*" until now many of them are using laxatives, narcotics and other crude drugs. On the other side, regular practice has been greatly modified and members have adopted several remedies, formerly known as Homeopathic, though dilution is usually omitted. A minority of Homeopathic practitioners however, known as the "Internationalists," that being the name of their society, still cling to the strict Hahnemanian principle. In recent years we have seen communications to the Homeopathic journals, in which the writers have advised prescribing for the quickest and safest relief of the patient without regard to system of practice or, factional affiliation.

Whilst higher mathematics has demonstrated the paradox of two objects constantly approaching each other but never coming in contact, I think, generally speaking, we have come so near meeting at the half way point it is time to drop denominationalism, leave out dissensions, and meet in the same fraternal councils for the betterment of ourselves and the glory of our mission under the modest title of physician.

The following is from the Eclectic Medical Journal: "There never may be union of the schools of medicine, but still there is and will be to a greater extent than now, a disposition to allow the qualified physician to pursue his course without molestation and without excommunication. All the wise medical men are not found exclusively within the pale of any sectional medical field, and the wisest and best now meet on a common level. A qualified physician who is a gentleman also, and devoid of quackish tendencies, is admitted into the company of men of the same character, and no questions asked in regard to his school affiliation. That which has never been accomplished by adverse criticism, abuse and intolerance, is very likely to come about by conciliation and recognition of merit. In this way: There will soon be a union of medical men regardless of schools. The name Eclectic does not mean much as far as it suggests choosing from other schools, in fact in

this sense it does not mean anything and is a misnomer and we would be better off without it." Now, is any one benefited by the qualifying adjective, Eclectic or, Homeopathic, except the college professor who has a specialty to be fed from general practice, books to sell or, other ax to grind. An observation of several years has convinced me that these title adjuncts cause dissension among the laity and discord in the profession, and the sooner they become a matter of history the better for us.

The understrata of the laity seem to think a knowledge of medicine easily and cheaply acquired and the practice a snap for those who follow it. They consider their time and brawn equal to the physicians' tact and talent for a similar period. This, I think, is in part from the lack of better example on the part of the profession.

Dr. A's patient, may decide to change attendants; Dr. B. takes charge and tells the whimsical patient that the preceding doctor had not made a proper diagnosis and a great part of his ailment was the result of drug pathogenesis. Dr. C. gets in his work in time and tells them that neither of his predecessors understood the case and their crude methods and potentised moonshine had all been wasted time. Patients and friends decide that the doctors were all off, and Mrs. Hooligan's skunk oil did the work of beating the undertaker. Now comes the bills and the vigorous kicking. Some doctor, thinking it his opportunity, tells them that half the amount would liberally compensate the cheap John medical men for their past time and little bit of medicines, and the doctors are paid off in vulgar criticisms. This kind of professional bushwhacking is not alone between different schools of medicine, but graduates of the same college, attempt in this manner, to keep themselves at par by knocking others down. Whilst we will always have Ishmaelites and anarchists in the professions as well as in the slums, thorough organization and a better understanding of each other, would certainly go a great way in correcting this evil and place us in better estimation before the public. A few years ago we read of a wag who approached a negro preacher with some ludicrous questions in regard to the various creeds and confessions of faith, and which was to have the preference at the final round up. The old darkey, with an air of wisdom said: "When a farmer comes to market with a load of grain he is not asked by which route he came to town, but the dealer samples his product and offers a price according to quality." Might a little of the colored man's theology not be an improvement to our fraternity and help us to form that oneness of purpose which will strengthen our ranks and command a higher degree of respect from the laity, and secure better protection from the courts?

Religious denominations have experienced the mistake of fighting and antagonizing each other and are now mutually working together along the same lines. So let us come together on the same platform and stand or fall as merit may dictate.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President W. W. Williams, Quincy
 First Vice Pres. A. D. Bates, Camp Point
 Second Vice Pres. Henry Hart, Quincy
 Secretary John A. Koch, Quincy
 Treasurer L. H. A. Nickerson, Quincy
 Censors: Jos. Robbins, Quincy; C. D. Center, Quincy; R. J. Christie, Jr., Quincy.
 Delegate to State Society, E. B. Montgomery, Quincy.

The regular meeting of the Society took place in the Chamber of Commerce Rooms March 14th. Vice-President Henry Hart presided in the absence of the president.

The following members were present: Drs. Ashton, Byers, Center, Christie, Jr., Hart, Pfeiffer, Rosenthal, J. G. Williams and J. A. Koch.

A letter was read from J. F. Percy, Councilor of District No. 3 of the State Society, inviting the secretary to meet with the other secretaries of the county societies of the district in Galesburg March 18th. The secretary was instructed by the society to attend this meeting.

A letter from Dr. Egan of the State Board of Health was read asking for the portion of the December (1903) minutes in which a member complained of the inaction of the Board when complaints were made. The minutes were forwarded and in reply Dr. Egan wholly denied any dilatoriness and stated that the party who had violated the law was brought in court at Bowen, Ill., December 9th and fined, a week after complaint had been made.

G. E. Rosenthal read an essay on

CHRONIC HEMIPLEGIA.

Geo. E. Rosenthal: Chronic hemiplegia as considered here includes only those cases arising from cerebral haemorrhage.

Locomotion in the chronic hemiplegic subject is so impaired that his journeys are not wide and hence his physical and mental horizon is sharply circumscribed, more especially if he be the resident of an institution and removed from his kindred.

Shelved now from great usefulness his mind is busy with the events of the past and because of a certain obtundity of the higher mental faculties he does not chafe under his enforced confinement or inaction nor is his grief over his affliction as severe as it would be were his faculties in the normal state, yet he magnifies his minor ills to great proportions, he sees favoritism where it is not and broods over fancied slights. This, however, is a mental condition frequent in the aged and can not be said to be peculiar to the paralytic, though of earlier onset and more accentuated in him; a kind of precocious second childhood.

A subject having R. Hemiplegia is many times more emotional than his fellow of the left, the emotional condition being still further accentuated if he be motor aphasic, in which case he may break into tears if addressed in the most casual way, his tears, his stutterings, his efforts to express himself, futile even when aided by his gestures, are indeed painful to witness.

If education of the opposite speech center has been undertaken and he can repeat a few

of the letters of the alphabet he will parade his accomplishment as long and as frequently as he can get a listener.

For days he may be under the influence of a depressing thought, weeping and sobbing almost continually, breaking out into more violent paroxysms of grieving if addressed or if attempt at comforting be made.

Later as the aphasic condition becomes chronic each remark addressed him may be accepted with a smile or chuckle, low-pitched, guttural and animal like in character.

After two years or more of the hemiplegic state he may have delusions, hallucinations, a change of disposition. The listless paralytic, whose greatest concern was his daily stool and the condition of his appetite, may become suddenly alert, inquire frequently and with great solicitude about his improvement and the ultimate prognosis of his case, may walk indefatigably about his room, day after day, with the idea of redeveloping his crippled members, may purchase a battery and use it religiously for the same end, may spend all his available substance with quacks and nostrum venders, may have hallucinations of persecution by his fellows, or imagine that he can feel numberless bacteria invading his conjunctivae or nares. Generally we may say the trend of disposition in Hemiplegia from haemorrhage is towards the melancholic with dulled faculties. In paralysis from thrombus or embolus there is little or no dulling of the faculties and an increase of querulousness and irascibility.

The face on the affected side in Hemiplegia is smooth and expressionless and the characteristic wrinkles obliterated in the lower half, the brow and ocular being unchanged since the *Corrugator Supercilii*, *Orbicularis Palpebrarum* and *Occipito-frontalis* are not affected.

The mouth is drawn towards the sound side and the tongue in the opposite direction, there is inability to pucker the lips and the labials are indistinctly articulated. In eating the food collects between cheek and teeth, the cheek may flap during sleep with inspiration and expiration because of *Buccinator* paralysis while the nostril of the paralyzed side does not dilate on forced inspiration.

Reflexes on the affected side are exaggerated and Ankle Clonus can usually be obtained. The muscular atrophy in the condition is that from disuse only.

Rigidity begins about the second week, this gradually develops into firm contractures, involving the extensors of the foot more than the flexors. In the hand and arm the reverse is true, the flexors being in a spastic condition, the fingers flexed into the palm, the wrist upon the forearm, the forearm upon the arm while the whole extremity is held close against the abdomen by the adduction of the shoulder.

The leg is rigid, is moved stiffly and slowly, there is difficult and incoordinate flexing of the knee, the foot being extended the toes drag upon the ground. This is counterbalanced in part by an upward tilting of the pelvis on the paralyzed side, combined with a circular sweep of the leg forward, the toes scraping the ground for the whole or a part of their journey; the so-called moving action.

The upward tilting of the pelvis in walking is rendered necessary by another factor besides the extension of the foot; it is the drooping and relaxation of the entire paralyzed side amounting in the shoulder to 2 or 3 inches.

Frequently the hemiplegic will complain of cramps on the affected side, the hand and foot usually suffering more than those portions nearer the trunk, these pains being due to the contractures.

Headache of the migraine type and in the side of the lesion and sensations of heat or cold on the affected side are not infrequent.

Of all the intercurrent ills constipation is the one that requires most unrelenting attention and sometimes heroic treatment. The factors in the condition are many and may be tabulated as follows:

(a) Hemiplegic intestinal sequelae, which may be elaborated as follows:

Motor Sequelae.

1. Impaired innervation of the unstriated muscle of the intestine causing impaired peristalsis.
2. Impaired innervation causing enteroptosis from lessened tonicity of unstriated muscle of the mesentery.
3. Impaired innervation of abdominal muscle and diaphragm resulting in lacking co-operation in the act of defecation.

Sensory Sequelae.

Impairment of the sensory nervous supply of the intestine resulting in dulled recognition of the presence of faecal matter, the stimulus of peristalsis.

Vaso-Motor and Secretory Sequelae.

1. Impaired arterial vaso-motor innervation causing insufficient arterial supply to the intestinal musculature and Lieberkuhnian, mucus and Lymphoid glands in the presence of content undergoing digestion and excess in interval of digestion, the rhythm of arterial supply being disturbed.
2. Impaired venous vaso-motor innervation causing a dilation of the veins and a venous stasis.

(b) Muscular degenerations of the aged (Abdominal muscles, Intestinal muscles.)

(c) Enforced sedentary habit (wheel chair existence.)

(d) Defective teeth or a lack thereof predisposing to the bolting of food in large particles, the avoidance of food containing much fibrous residue and the partaking of liquids and breadstuffs alone.

(e) Insufficient intestinal secretion sequential to the diminished blood stream of age.

(f) Overeating.

So that it follows that the entire digestive tract from lips to anus shares in the paralytic misfortune, the muscles of mastication are affected as well as those of the tongue, the latter organ in its impaired condition of activity does not now place the particles of food accurately between the teeth for mastication as before, fragments of decaying food collect between gums and cheek, the action of the incisors and the attrition of bicuspsids and molars is carried on less forcefully, the secretion of the parotid, sub-lingual and sub-maxillary

gland is perturbed, the oesophagus, the stomach the small and large intestine suffer in their motor, sensory and secretory function as recapitulated, the rectal sphincter may assume a spastic condition, relaxing little or none at the moment of defecation. To overcome the resistance there must be greatly augmented pressure from the abdominal muscles, accessories which now fail since they have become atrophied from the disuse of impaired innervation, instead of presenting an even and equilateral tension, the affected side is of lessened tonicity and is sacculated outward because of the presence of the gut forced forward and downward by the sound rectus, the obliquus, transversalis and diaphragm which must also share the fate of the skeletal muscles on the affected side.

Further as a direct result of the misfortune to the lateral half of the body we have an impairment of the following physiologic acts:

All expiratory efforts, defecation as mentioned, parturition and micturition, the latter in the male from adynamic abdominal wall and bulbo-cavernosi offering no opposition to their fellows of the sound side, resulting in portional urination and dribbling.

These conditions may be demonstrated upon a spare subject but in addition may it not be true that the spastic contracture of the skeletal muscle may have its counterpart in a spasticity of the intestinal musculature and the incoordinate gait of the hemiplegic be reproduced in the intestine by an incoordinate peristalsis and from the same cause; a contracture.

Herpes affects these patients more frequently than their sound brother and on the paralyzed side. Decubitus ulcers are common in the bed-ridden, of quick development and slowhealing. Constipation is almost universal among them, the chronic nephritides occur not infrequently and a nephritis, a passive congestion of the lungs, a pneumonia of infective origin or a final haemorrhage may close the picture.

Discussion led by L. B. Ashton and followed by C. D. Center and R. J. Christie, Jr., and closed by Dr. Rosenthal.

Adjournment.

John A. Koch, Official Reporter.

LEE COUNTY MEDICAL SOCIETY.

The Pathology of Endosalpingitis, its Relation To Endometritis, Oophoritis, and Peritonitis. Symptoms, Diagnosis and Treatment.

Read by invitation before the Lee County Medical Society at Amboy Sept. 29th 1903, by A. Belcham Keyes, M. D., Instructor of Gynecology and Obstetrics, Rush Medical College, and Professor of Gynecology in The Chicago Polyclinic.

The conditions under which inflammation occurs in the female genitalia may be divided broadly into two classes:

(a) Those of infection of the intact mucous membrane.

(b) Those occurring on a wound surface; (after abortion, immature, premature, or term labor.)

The tubes in health are always an intact mucous membrane, and come entirely under the first heading. They do not even shed their

epithelium during, or in any way enter into menstruation, except under certain peculiar conditions vicariously, e. g. as in gynatresia.

The infection of the **Endocervix and Endometrium** is of the greatest interest, as it presents a wound surface, after abortion or labor; and, from infection occurring on this wound surface or the intact mucous membrane, the intact mucous membrane of the tubes is usually infected secondarily. (The menstruating Endometrium presents a surface, while not strictly a wound surface, it certainly is not an intact mucous membrane, and its condition predisposes to infection, if in a less degree.)

While tubal infection is usually secondary to the uterine, yet it is not infrequently secondary to an intra-peritoneal infection, via the so-called Menge's wave—a wave of fluid that is said to pass from the peritoneal cavity toward the tubes, or, if adhesions, between them and a hollow viscera; e. g. the intestine is present.

The **Aetiological Factors** can be divided practically into four classes:

(a) Noeggerath's infection from attenuated gonorrhoea of the male.

(b) Neisser's infection, acute gonorrhoea.

(c) Pus Strepto, or Staphylococci, or Pneumococci following gonorrhoea or infection of the post partum wound surface.

(d) Tubercle Bacilli also frequently following either the acute Neisser's, or the catarrh of Noeggerath.

(e) *Bacillus Coli Communis*, especially where the tube is adherent to the intestine.

A case of this was found by Dr. C. C. Hunt of Dixon.

Martin, in 278 cases of Salpingitis, found:

55 cases were gonorrhoeal,

10 cases were tubercular,

70 cases followed puerperal infection, and

that $\frac{1}{2}$ of the 278 cases were secondary to an endometritis.

Menge, in 122 cases, found:

28 cases with gonococci,

3 cases with streptococci,

9 with tubercle bacilli,

75 with sterile pus, (so-called.) The present day literature shows that many of these cases were probably tubercular.

The **first Noeggerath's infection**, named after the author, who, in 1888, first brought forward the importance of considering the effect of coitus on the female genitalia by a male supposedly cured of a previous attack of acute gonorrhoea (perhaps contracted as long as five or six years back), and stated that it was his opinion that cases of gonococcus infection in the male were only apparently healed; especially where a slight gleet (*goutte militaire*, or morning drop) still remains. The disease in the male in these cases, according to Noeggerath, was really only rendered latent, and that there followed, very frequently, infection of the female genitalia, with a **catarrhal condition** of the endocervix, endometrium, and endosalpingium, with a train of results, which I shall hereafter enumerate. Freitag, in his "Sexual Krankheiten" asks, "when may a man marry after an attack of gonorrhoea?" and states further, "when repeated examinations, microscopically, show no gonococci present."

The cause of this catarrhal condition, probably brought about by bacteria in the attenuated gonorrhoeal infection of the male, is difficult to prove; yet in many cases of erection doubtless attenuated gonococci and other bacteria are thrown off with the semen during coitus, while the ordinary, or even milked prostatic secretion, is free from them. These bacteria are probably capable of rendering inert the supposed power of the so-called *Leptothrix Vaginalis*, (a micro-organism, much like the *Leptothrix Buccalis*), that is supposed to change the alkaline endocervical mucous as it drops into the vagina into an acid condition, probably having antiseptic power, and rendering it capable of killing, in a short time, all ordinary pus micro-organisms, and thereby protecting the intact mucosa of the cervix, corpus, and tubes from being invaded by ordinary pus bacteria even though deposited within the vagina during the act of onanism, coitus with a healthy male, or during examinations, etc. (The endometrium and tubes were found free from bacteria in health by Winter and Kroenig found that streptococci, injected into a healthy vagina, could not be proven present after as short a period as six hours; also, Doederlein has made noteworthy experiments proving this antiseptic power of the vaginal secretion in healthy pregnant women).

On the other hand, pus micro-organisms, deposited in a vagina robbed of this self protecting power, easily gain access to the intact mucosa of the cervix, corpus, and tubes in turn, while still capable of setting up an inflammation, and from there frequently pass later on to the perimetrium and ovary, (especially during ovulation, at which time the ovary exhibits a wound surface at the site of the newly ruptured Graafian Follicle.)

The act of coitus, with a supposedly cured gonorrhoeic male, then, has two effects:

(a) Nullifies the self-protecting power.

(b) Also it deposits the micro-organisms, which usually infest the male urethra, in this condition of latent gonorrhoea. Steinschneider and Galewski found four kinds of so-called pseudo gonococci, especially frequent in this condition; two stained and two, like gonococci, destained by Gram's method.

The outcome is a train of pathological changes, not in one alone, but in all of the uterus and adnexae; and I believe that you will agree with me that clinically it is very difficult to study each singly; that they are more comprehensively studied together, at least for our paper tonight.

The **second kind of infection is Neisser's infection or acute gonorrhoea**. This occurs in various forms of virulence, according to the virulence of the infecting case or the resistance of the infected tissues to the diplococcus of Neisser in both sexes. It is very probable that a case contracted three to four weeks previous to the infection of the opposite sex, would not produce as virulent an attack as one contracted seven to fourteen days previous; yet they would both result in an attack of gonorrhoea, but probably markedly differing in degree of intensity. Also, a male, who has had a second or third attack,

in all probability may impart a virulent infection after many months. Evidence of this can be concluded clinically from the fact of the:

(a) Apparent early spontaneous recovery, or mildness of symptoms, in some cases.

(b) The easy response to ordinary therapeutic measures in others.

(c) The apparent intractability of not a few in both sexes.

Besides the superficial effect of these deploccoci of Neisser, we must always remember that their peculiar characteristics are divided into three:

(a) A superficial suppuration or blenorhoea.

(b) Their early passing down underneath the mucous membrane out of reach of superficial antiseptics, such as injections.

(c) Their peculiar qualities of preparing the tissues for the colonization of pus-bacteria and tubercle bacilli, so that even systemic infection by the former frequently follows attacks of acute gonorrhoea. Indeed, so much have these qualities attracted attention, that, in every case of acute articular rheumatism, we are advised by Gerhardt to enquire for the history of a previous gonorrhoea as forming the probable primary atrium; also to examine the urine of arthritic males for gonorrhoeal threads. It is estimated that two to three per cent of gonorrhoea (male) patients have arthritis, following more usually after the implication of the posterior urethra, i. e. after the third week. Females are said to suffer from this sequel less often than males; very probably from the correct diagnosis being less often made in the former.

Thirdly, Endosalpingitis is Frequently the Result of Puerperal Fever, especially after criminal abortion, performed for women, who have a great dislike to pass through pregnancy and labor, whose excuse is the attendant dangers of parturition; such women find, among midwives and even among supposedly worthy members of our profession, many ready to terminate the pregnancy for them with the result that frequently a post abortive endometritis and endosalpingitis follow.

(a) **Spontaneous abortion,** i. e. abortion that cannot be attributed to the introduction into the uterus of some instrument, or that is not caused by some very violent shock. The so-called spontaneous and habitual cases are, doubtless, usually the result of a Noeggerath's or other infection, making it impossible for the diseased part of the endometrium to form a healthy decidua vera, so that the pregnancy results in an abortion when the decidua reflexa of the growing ovum reaches the diseased place in the vera (usually protracted, painful, and frequently incomplete) and not from some apparently slight cause, like riding in a buggy or stepping down a step, which latter are usually merely coincidences. Infection now occurs from bacteria of the endometritic foci already present (Bumm), which takes advantage of the wound surface made by the abortion they caused, giving rise to acute post-abortive endometritis and often secondary salpingitis.

(b) The next kind is usually that of **criminal abortion**, wherein, during the introduction

of the instrument for abortion, the bacteria are carried into the uterus and deposited on the wound surface made often causing incomplete, painful abortion and endometritis, often followed by endosalpingitis.

(c) The third group of cases is where the infection occurs consequent on **contact infection during the examination** of the patient, who has already begun to abort, or is in labor, or during its puerperium by the physician, nurse, or midwife; though I would, from my own experience, like to state that in the majority of cases, in the hands of the more careful practitioners of today, the infection occurs most often, as stated in (a) and (b), and the physician in charge often gets the credit of lack of care and cleanliness, and skill and is helpless to prove the truth of his innocence and even could he prove it to the satisfaction of the average earnest practitioner no lay jury would believe him, and many an innocent professional man has had his reputation blasted by the silent lips of the dying who could have cleared him by a word.

Consideration of these facts makes it essential to not examine cases in progress of abortion inadvisedly and when making to be absolutely surgically clean. These cases are very frequently streptococci inferior, do not always involve the tubes on account of the early inflammatory closure of the ostium uterini tubae.

Salpingitis is most often on the left side. (Martin). This would seem to contradict the idea that Clado's ligament, the fold of peritoneum that passes from the region of the appendix to the right broad ligament, carries infection via its blood vessels and lymphatics as often as the anatomical fact would have us believe.

I believe one would be perfectly justified in making sharper divisions than now prevail in the terminology for the inflammations that attack the tubal peritoneum, the musculature, and the mucous membrane, under the heading of:

(a) Peri-salpingitis.

(b) Salpingitis.

(c) Endo-salpingitis.

(a) The peri-salpingitis is Tubal Peritonitis, and occurs primarily in all cases of pelvic peritonitis, i. e. perimetritis.

(b) Salpingitis is an inflammation of the musculature of the tube. It is always secondary to an inflammation from without (peri), or from within (endo-salpingitis).

(c) The endosalpingitis is inflammation either by continuity, via the uterus, or from floating bacteria in the peritoneal cavity, via Menge's peritoneo-tubal wave.

(To halt by the way a moment, to dilate on the aetiology from a sociologic standpoint, I believe we can attribute the enormous increase in the number of cases of gonorrhoeal infection in this day to the easy access by railroads, to large cities where resorts of vice abound; also, consequent on the increased strenuousness of life, early marriage is made more and more difficult. A great deal of the present misery of both sexes could be avoided, if the dangers of these things were more fully explained to the unsophisticated youth, especially if he were informed of the long train of possible results to both him, his wife, and his offspring.)

Despite the foregoing on the different bacteria that may affect the tubes, we divide the infection, clinically, into three classes only, viz:

- (a) Catarrhal.
- (b) Purulent.
- (c) Tubercular.

The first two, catarrhal and purulent, may be from the same bacteria, only differing in degree of virulence.

The **Catarrhal Endosalpingitis** is characterized by its lighter grade, (as in any catarrhal affection, of any mucous surface) with epithelial hyperplasia and swelling, and infiltration of the dendritic processes of the tubes. (The inflammation seldom extends but little lower than the submucosa) and causes, at first, a narrowing of the lumen of the tube.

The more severe catarrhal inflammations have some loss of the superficial epithelium, in patches. The increased secretion flattens the dendritic process and later widens the lumen. In recent inflammations the increased secretion is mucous, later more serous, and in old chronic cases, often hemorrhagic.

The division of catarrhal endosalpingitis into,

- (a) Pseudo-follicular,
- (b) Isthmica nodosa,
- (c) Interstitial,

are really only the anatomico-pathological phases of the same thing. The tube either remains patent, or, if the inflammatory process is sufficiently severe, it may extend on to the fimbriae and cause the formation of pseudo-membranes on their peritoneal surfaces (perisalpingitis) gradually closing the tubes whose necessary secretion being of a mucous or serous character, collects at the (fimbriated) abdominal tubal end, and causing thereby a **hydrosalpinx**.

The collection at the closed abdominal end of the tube gradually distends the tube and causes pressure atrophy of both the processes, and the tubal wall, first resulting in a club-shaped, later becoming a cylindrical sack, as the distending material distends it toward the uterine end. (Indeed, in some cases if the uterine end is open, the contents of the distended tube may, from time to time, be discharged through the uterine end into the uterus, being then discharged, per vagina, during some act of increased abdominal tension, e. g. defaecation or coughing, giving rise to what the ancient authors called **Hydrops Tubae Profluens**, an interesting case of which is reported by Scanzoni, who found post mortem one **Hydrops Tubae** distended, the other a relaxed, empty sac.) The tube thins so markedly from pressure atrophy that it becomes thin and translucent like a bladder, and may even reach so large a size that they have been tapped for large ovarian Cysts.

Now let us pass on to the **effect of the Material that Dropped into the Abdominal Cavity**; for, while in some cases the tubes are closed by the early formation of adhesions before little or any invasion of the peritoneal cavity, or ovaries, has occurred, others remain open at the abdominal (fimbriated) end, and continuously deposit, into the peritoneal cavity, an infectious mucous in large quantities, causing **low grade peritonitis**

with the formation of pseudo-membranes upon the adjacent pelvic peritoneal (peri-metric) surfaces, which later become more or less replaced by connective tissue from the endo-thelium of the peritoneal surface, ranging from spider web to thick and firm adhesions, uniting the uteris and adnexae and broad ligament immediately together, or by means of bands.

Let us follow this process into the ovary, immediately connected to the tube as it is by the fimbria tubo-ovarica, lying in the so-called ovarian fossa, a depression on the posterior surface of the broad ligament, covered by its cubical epithelium germinativa. The pseudo-membranes often cover the ovary, (just as occurs over the end of the tube), giving rise to dysovulation or even preventing it; or indeed, the infection may extend into the peripheral, and later into the middle portion of the ovary, the membrana granulosa cells die, and cysts form, retention cysts of the graafian follicles or **hydrops folliculi**, and sterility is liable to result. Or, if the pseudo-membrane is thin and allows of ovulation, which frequently occurs through a very small opening, which quickly closes, it leads to a **hydrops or haematoma corpus luteum** or indeed the opening may be too small for the ovum to escape if the tubes are still patent for spermatozoa ovarian pregnancy result.

Or sometimes the end of the tube becoming adherent to the ovary, it leads to a **tubo-ovarian cyst** or even pregnancy.

II. The Purulent Endosalpingitis:

This differs from the catarrhal only in the degree of intensity. The inflammatory process and infiltration extend more deeply into the wall of the tube, causing much thickening, while the lumen is ulcerated in places and is usually narrow, often containing only a slight quantity of pus. It is usually increased tortuous and club shaped, with the club end at the fimbriated extremity, and often about little finger size or slightly larger. The material may drop into the peritoneal cavity, causing an acute peritonitis; but, fortunately, either the lumen is so narrowed that the pus does not flow out, or the pus is too thick and inspissated, or the tube end closes so early that retention is caused.

(The term **Pyosalpinx** is very, inappropriate, as it gives no idea as to whether the fimbriated end is closed or not, as does the term **Hydrosalpinx**; therefore, the term of Martin's of **Sacto-Salpinx Purulenta** is much more appropriate for the closed tube.

The action upon the ovary of pus escaping from the tube gives rise to variable conditions: pus-bacteria may invade the ovary, especially through a thin walled, ripe graafian follicle lying near the surface, giving rise:

- (a) To a **graafian follicle abscess**.

Or should this graafian follicle rupture, i. e., ovulation take place, it would give rise to:

- (b) A **corpus luteum abscess**.

Indeed, we must always remember that, while intact mucous membranes and other surfaces can resist considerable infection, the **ovary presents after every ovulation a wound surface**; so that the corpus luteum abscess may follow even comparatively light catarrhal, as well as purulent, inflammations of the tube. This fact

has been well demonstrated by Menge, who found in cases of corpus luteum abscesses the same kinds of bacteria were present as were found in the tube.

III. Tuberculosis of the Tubes:

This disease frequently follows in the wake of both acute gonorrhoea and Noeggerath's infection; it is the most frequent form of genital tuberculosis of women; for, as the gonococci make a soil for the pus-bacteria, they also make a soil for the tubercle bacillus.

(a) Tuberculosis, like catarrhal inflammation, gains access to the tubes per vagina and uterus, especially in cases of tuberculosis of the seminal vesicles in man. Also, it is quite conceivable that (pulmonary) tuberculous males may, by handling the penis, thereby carry infection into the genitalia of the female during the act of coitus.

(b) The other roads are in tubercular peritonitis of the female, (especially common near the head of the colon), the tubercle bacilli being carried by Menge's wave, i. e., the little wave of fluid, toward the tube from the peritoneal cavity that is supposed to direct the ovum into the tube, en route for the uterus.

(c) The third route is that via the blood vessels, or lymphatics. The tubes are especially prone to tuberculosis, due to their anatomical peculiarities and slight exchange of the mucous secretion, especially if catarrhal inflammation and narrowing allows tubercle bacilli to remain long resident* should they gain access to its lumen. In catarrhal conditions, the mode by which the bacilli are taken up by the protruding phagocytes, and carried into the lymphatics, causing minute tubercular abscesses, which later rupture into the lumen of the tube leaving tubercular ulcers, is very probably much like that in the apices of the lungs so ably described by Fuetterer. The secretion of the tube is increased and frequently, as in the other inflammations, the end of the tube is closed, giving rise to a **tubercular pyosalpinx**.

As in the catarrhal, so in the tubercular, the process being of a low grade of infiltration; these tubes also become enormously pressure atrophied and distended, sometimes reaching as high as the umbilicus, a big, round, tubercular pyosalpinx. (These enormously distended tubes were previously taken for ordinary pus tubes, in which the pus micro-organisms had become attenuated or had died.) I pointed out to you acute pus tubes as being usually thick walled, due to much inflammatory infiltration of their walls, and as resisting distension atrophy; but these being absent in tuberculosis, the distension is easy to understand, and most of the cases, which were, until recently, considered enormous pus tubes because of the appearance of their contents, and that the bacteria were dead were probably tubercular, as can be proven by the inoculation of animals and the frequent presence of giant cells in the walls of the tubes.

This explanation dispels the wonder that has hitherto prevailed in many cases of women carrying enormous pus tubes with but slight, if any, symptoms. In other cases the tubes, uterus, and ovaries are bound together in one solid mass by adhesions.

The Symptoms of Salpingitis, as may be judged from the pathology, are frequently those of a uni or bi-lateral peritonitis, because of the very frequent implication of the peritoneum.

(a) The very light cases of catarrhal salpingitis are often simply those of past hymenal dysmenorrhoea, often beginning very soon after marriage. Such cases simply complain of a little pelvic pain, usually referred to the sides of the pelvis, or back, or both, especially marked at the time of the period due to the markedly increased swelling of the (Noeggerath's catarrhal) mucous membrane of the tubes, together with the dropping from the tube into the peritoneal cavity of a more or less infectious mucous, causing a light attack of peritonitis, perhaps with pains lasting for a few days; recovery occurring shortly after the period is over. Such cases, on examination by speculum, usually reveal a simple erosion, and in the nulliparous cervix one frequently sees plugs of mucous distending it and protruding from the os. The manual examination shows uterus to be slightly enlarged, perhaps adherent; tubes and ovaries often tender for a week or more after the period; all symptoms disappearing by midway between the periods.

(b.) In the more severe catarrhal conditions, these symptoms are the same, but of increased severity. Leucorrhoea is often marked; the dysmenorrhoeal pain is excessive, passing on to the boundary line of a true attack of peritonitis; there is an increased pulse frequency to about a hundred, and temperature one hundred to one hundred and one degrees Fahr., and marked tension of the abdominal walls. The speculum shows the cervical erosion to be more pronounced, often either follicular or cystic; Bartholin's gland ducts and the urethral meatus (maculae gonorrhoeicae of Saenger) are often reddened and ectopiated. The bimanual examination reveals marked tenderness, most at the period, and, though lessening after period is over, often continues through to the next period, when another exacerbation occurs. The increased thickness of the tube, and the increase in the size and tenderness of the ovary, is often to be made out on palpitation. Both of these (a and b) catarrhal conditions are especially liable to have exacerbations of pain and fever after any undue exertion, violent coitus, getting the feet wet, etc., to which they are usually entirely attributed. Sterility is extremely common, first because the spermatozoa may not be able to pass through the tube, or because the ovulation cannot take place, and as the endometrium is nearly always concomitantly implicated, and, should pregnancy occur, early abortion usually follows. Extra uterine pregnancy is also extremely common in catarrhal endosalpingitis, where the lumen becomes too small to pass a fertilized ovum. In fact, perhaps the haemato-salpinges that occur in catarrhal conditions are probably more frequently, than supposed, very early extra uterine pregnancies of the tube; and from our better knowledge, I believe, today, we can explain the cause of ectopic gestation better than to say it simply occurs in women, who marry late in life, but rather that elderly women usually

marry men of like age, who have had ample time to become infected and capable of setting up a Noeggerath's disease in the female.

(c) **The symptoms of the acute salpingitis** are of a more acute grade. The peritonitis is more pronounced, frequently lasting over some weeks, with pulse one hundred and ten and higher, temperature one hundred and two to one hundred and four degrees Fahr. The breathing is almost entirely costal, the abdominal muscles being tightly contracted. Bi-manual examination reveals more or less irregularly shaped masses by the sides of the uterus, very tender to palpitation; or tubes, ovaries, and uterus may be united in one conglomerate mass. In fact, the tenderness of the patient often makes the examination both difficult and unsatisfactory, so that the extent of the disease can frequently be told only at the time of the operation; and even then it may be difficult to recognize the different parts of the genitalia. The leucorrhoea is mucopurulent, the erosion often more acute, as is also the implication of the maculae gonorrhoeica from which pus can often be expressed containing gonococci if the case is of recent gonorrhoeal origin, or we obtain a history of the puerperal infection. In more recent cases the enlarged tubes can frequently be traced from their uterine end outwards. The bilateral condition speaks for tubal disease, the unilateral more for ovarian abscess.

(d) **The tubercular variety** often reveals comparatively slight symptoms much like the catarrhal variety in the early stages, but frequently with a much more persistent pain. Bi-manually, we can sometimes make out nothing abnormal in the early stages, except a marked tenderness, especially latero posteriorly, while later one may appreciate a rosary like condition at one, or both sides of the uterus; but in the later stages, tubes, uterus and ovaries are often bound together in one stiff mass. In contradistinction to the pain and no physical changes in one, case, there may be great distortion of the genitalia with almost no subjective symptoms in another. The presence of the circumscribed, or even free ascitic fluid without hepatic, renal, or cardiac aetiological factors; the presence of tuberculosis in some other organ, e. g. the lungs, often guides us in concluding that the disease is tubercular.

Treatment: The treatment, in brief, of diseases of the genitalia of the female differ according to the severity of the disease.

I. **The Catharrhal Varieties** generally demand simply regulation of the bowels, rest from all sexual excitement and coitus, and change to some salubrious climate. Not infrequently, long vacations bring about such an improvement of general health, especially if there is absence of the repeated congestions of coitus, and a subsidence of the condition of low grade tubal catarrhal inflammation, so that, in cases apparently sterile, pregnancy (that goes to term) occurs on re-institution of marital relations. In other cases, curettage, done systematically, followed by packing with a strip of iodoform or other antiseptic gauze, apparently, has a very salutary effect upon the condition of the tubes. Great care in curetting should be exercised in order not to push the curette through the uterus,

especially in the catarrhal conditions that have been caused by, or accentuated by, infections following abortion, as in these cases the uterine wall is especially friable and easily perforated. Despite the fact that we frequently institute these measures with success, we must always remember that to treat the inside of the uterus for an endosalpingitis is very analogous to giving a gargle for an otitis media, and, that despite the measures above suggested, the marked pain frequently demands a laparotomy with releasing of adhesions, and often salpingectomy, etc.

II. **In the Purulent and Tubercular Variety**, the radical removal, under great care in the former not to drop any of the material in the peritoneal cavity, is the only real therapeutic measure.

Marriages and Deaths.

Marriages.

Charles E. Cord, Chicago Heights, to Mrs. Laura Beeler, of Chicago, Feb. 27.
Lorin C. Collins III, to Miss Anna E. Lendblad, both of Chicago, at Wheaton, March 10.
Jos. R. Hawley, of Chicago, to Miss Daisy Miller, of Muskegon, Mich., Feb. 11.
David Salinger, of Chicago, to Miss Amalie Frisch, of Baltimore, Md., March 7.
Robert B. Spalding, of Clinton, to Miss Mamie M. Scott, of Selma, Cal., March 6.
Jacob L. Albright to Miss H. Mabel Evans, both of Chicago, March 9.

Deaths.

Anthony, John A., recently of Chenoa, McLean County, died March 26 at Boise City, Idaho, where he had gone to locate.
Battell, J. G., East St. Louis, March 10, aged 32.
Campe, Samuel B., Chicago, March 12.
Cook, Charles E., Huntley, McHenry County, died Feb. 18 of pneumonia, aged 51.
Dombrowski, John Paul, Peoria, March 29. Dr. Dombrowski was one of the leading and successful oculists of Central Illinois. Acute pneumonia and complicated nervous prostration, the result of overwork, is given as the cause of his death.
Kendall, C. H., Barrington, Feb. 21, aged 45.
Lyman, John C., Chicago, March 29, aged 53.
Malone, George B., Park Ridge, Feb. 17, aged 54.
McKendree, F. D., Chicago, Jan. 17, aged 48.
Mitchener, Guy W. O., formerly practicing at Kansas, Edgar County; committed suicide in Guthrie, Okla. Mitchener pursued the avocation of a traveling specialist for a few months in Illinois in 1902. He became legally involved and was incarcerated in Hillsboro for some weeks, finally leaving the State.
Noel, E. P., Chicago, March 29, aged 37. He was formerly physician to the coroner and city attorney. He died in Phoenix, Ariz.
Pettingill, John B., Chicago, March 22, aged 59.
Pomarane, Marx, Chicago, March 2.
Silvey, Asa R., Murphysboro, aged 47.
Small, Harry N., Chicago, March 15, of apoplexy, aged 62.
Sovereign, C. W., Chicago, March 22, aged 54.
Vincent, Levi, Weston, Feb. 12, aged 77.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street.....	President
FRANK X. WALLS, 4307 Ellis Avenue.....	Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....	Treasurer
W. A. EVANS, 103 State Street	Chairman Medicolegal Committee
W. M. HARSHA, 103 State Street ...:	Chairman Membership Committee

APRIL, 1904.

At the meeting of Feb. 3, 1904, the following papers were read and discussed.

Suture Work of the Lower Abdomen.

By Dr. E. Wyllys Andrews.

E. Wyllys Andrews demonstrated the suture work of the lower abdomen by means of a model or phantom, which he uses to teach herniotomy and the insertion of the fascial sutures.

Discussion.

Daniel N. Eisendrath: I congratulate Dr. Andrews on this excellent model with which anyone can understand how to suture the different layers of tissue in performing herniotomy, etc. It would seem to those who are witnessing an operation of this kind that the technique is very difficult. Those who have observed me do a herniotomy say that the technique seems rather complicated, but after it has been demonstrated to them on such an excellent model, as the one that has been shown tonight, the operation seems comparatively easy.

Dr. Andrews did not ask us to discuss the value of the operation, but I take this opportunity to endorse most fully all of his recommendations in regard to the value of the same. I have performed the operation fifty times. In all of the cases I operated by the Andrews modification of the Bassini method. I examined a man the other day on whom I operated five years ago, and there were absolutely no signs of recurrence. It seems the most perfect operation to overcome the anatomical defects which one can possibly think of. The operation of placing behind the cord the three muscles, that is, the transversalis, internal oblique, and the internal portion of the aponeurosis of the external oblique, gives us one additional strong layer over the Bassini operation. Placing the cord in such a position as Dr. Andrews has shown in between the two portions of the external oblique protects it from injury.

The only deviation which I have thought of in regard to this particular operation was in cases of undescended testis, where the extra length of putting the cord so much more superficially would naturally result in a little higher position of the testis than would obtain ordinarily, and I believe the recommendation which was made first by Dr. Bevan to leave the cord

in its natural position, and not change the position of it—with that modification we can use the operation for every variety of inguinal hernia.

Louis A. Greensfelder: I want to congratulate Dr. Andrews on having placed before us a model by which we can readily demonstrate not only the Bassini operation, but the Andrews imbrication method. I have found it exceedingly difficult to try to explain to students and practitioners just what is meant by the imbrication method, or just how the suturing is done in the ordinary herniotomy or Bassini operation. Furthermore, I congratulate him upon a method which I regard as perfect. Since 1894 I have used the Andrews imbrication operation exclusively, and have not had occasion to regret it in a single case. I have also had the opportunity of following a number of cases that were operated on by Dr. Andrews; I have seen them from time to time in clinics, some of the patients coming for other purposes, and have had the opportunity of watching these cases for a number of years, and barring those in which there was an infection, I do not recall a single case in which there was a recurrence. The operation has the advantage over the Bassini method, in furnishing an additional strong layer, as was pointed out by Dr. Eisendrath; and in addition restoring the original obliquity of the inguinal canal.

Dr. B. W. Sippy presented a case of **Cholecystitis with Gastric Motor Insufficiency**, which was discussed as follows:

A. J. Ochsner: The paper of Dr. Sippy is of great importance to us. I am personally very much interested in the subject because I see every week several of these patients who have been cured many times by various physicians whom they have consulted. The gastric pains, are no doubt due to the presence of gall-stones in a large proportion of these cases. Each one of the attacks, unless a gall-stone becomes impacted, or unless infection accompanies the acute attack, will subside, and the gastric disturbance will disappear. But the patient will have a further attack; he will go to a second physician, who improves his condition; he goes to a third, a fourth, a fifth and so on, until he is relieved finally of his gall-stones, so that the conclusions at which Dr. Sippy has arrived are correct. This patient should have the gall-

stones removed, and then she will be relieved of her gastric trouble.

I wish to draw attention to a condition which has not been very generally understood. Observations have led to the conclusion that so much of the duodenum as is above the entrance of the common duct is virtually, so far as all practical purposes are concerned, part of the stomach, and that in these gall-stone cases the obstruction is not from adhesions, as we thought five or six years ago, before we operated upon cases of stomach trouble as often as we do now. At that time we thought the obstruction, which caused this dilatation, was due to adhesions. Now, we find that, as a matter of fact, the obstruction subsides immediately without the disturbance of adhesions, as soon as the gall-stones are removed. The adhesions which have been observed at the time of the operation could not have absorbed in the time in which relief was afforded, so that the patient is relieved, notwithstanding the fact that adhesions are still present. This would lead up to suppose that the obstruction is located a little below the entrance of the common duct into the duodenum. There are many things that speak for this, among them the frequency with which we have ulcer of the duodenum in connection with ulcer of the stomach; the frequency with which we have vomiting of bile; instead of the bile passing down, it is expelled with the vomit in these cases. This fact I have proven by a large number of chemical analysis made of vomited matter in connection with the preparation of an address on gall bladder surgery.

In the case which we have had before us tonight the patient spoke of the bitter stomach contents. That is what these patients usually complain of; it is the bile which has been forced back into the stomach because the obstruction is at this point; in other words, there is a physiological obstruction. We have a similar obstruction at the ileo-cecal valve when there is irritation in the appendix. Fifteen years ago we thought there was intestinal obstruction in such cases. Aside from the experiments of Cannon, Kraus, Proux and Psalthazart, we have no definite experiments which will show at what points the intestinal canal is segmented; but that it is definitely segmented, I think, we can conclude from Cannon's observations alone. Finally, we have further evidence in the fact that whenever the stomach is absolutely empty, the gall-stone colic ceases immediately. I simply draw attention to this clinical observation because I believe that it will do away, if it is fully understood, with our paying any particular attention to the stomachic portion of the disease, so long as we leave gall-stones in place. If we remove the cause, the effect must follow. Just as soon as the diet, prescribed by Dr. Sippy in the treatment of this case, established a condition of rest, the infection in the gall-bladder subsided and there was no further irritation because of the presence of the gall-stones. In other words, a person can carry about a number of gall-stones without any trouble to speak of, so long as there is no infectious irritation of the gall-bladder. The moment you wash out the stomach and

begin rectal feeding, the infectious irritation of the gall-bladder begins to subside, because very soon bile will wash away the microbes, and they have no more opportunity to cause irritation. But as soon as the patient begins to eat regularly, the food has to pass this point, the gall-bladder becomes again irritated, and the stomach trouble returns, and the patient goes to the next doctor to get cured, but she does not actually obtain permanent relief until these gall-stones are removed.

Fenton B. Turck: One rarely finds a case of cholecystitis without its being associated with, more or less, atony of the stomach. Exacerbations of atonic dilatation may occur with each attack of cholecystitis, and subside in the quiescent stage. The only symptoms that may be present are abdominal distress and digestive disturbances, and those who see many cases of diseases of the stomach have noticed in atonic dilatation of the stomach how often cholecystitis is found. Drainage of the gall-bladder and removal of stones, if found, frequently result in the disappearance of all the symptoms, including dilatation of the stomach and atony of the colon, with return of the normal bowel movements. When cases are sent for operation, without a positive diagnosis having been made, as to whether there is obstruction or simply atony of the stomach, opening the abdomen reveals the fact that it is not only a case simply of cholecystitis or of gall-stones, but on opening the gall-bladder muco-purulent bile is found containing the colon bacillus and cocci. The toxemia may be the cause of the atony of both the stomach and intestines. Kehr has called attention to some interesting cases of this kind. In opening the abdomen in one case he found dilatation of the stomach. He opened the gall-bladder, removed some gall-stones, drained it, and found that the gall-bladder contained "muddy bile." The patient acquired, in addition to a chronic dilatation of the stomach, an acute dilatation, and died shortly after from cholemia and hemorrhages.

There has been a good deal of time spent in the preliminary presentation of the case of Dr. Sippy; but the principal question is as to whether this atony can exist on account of obstruction, or whether it is simply an atony of the stomach wall. That is a very important point to decide. In a case of this kind, I think if the gall-bladder is opened and drained, there would not be any more stomach trouble. Most of the cases of obstruction at the pylorus are surgical cases, particularly when they are correctly diagnosed as such. If so, what is the use of delaying operation, permitting the patient to have recurrence after recurrence, and then later on, when very much emaciated, undergo an operation which the patient cannot very well stand? The reason for the high mortality in these cases is due to delayed operation. Cases of pyloric obstruction should be operated upon as soon as an accurate diagnosis is made, and it remains for the surgeon to determine whether gastroenterostomy or pyloroplasty is indicated. Pyloroplasty, according to the method of Finney, is perhaps one of the best operations performed in many of these cases. I remember very well a case shown me by Dr.

Finney in which five operations were performed for atonic dilatation of the stomach, without obstruction, two gastro-enterostomies, two pyloroplasties, and a folding-up of the gastric muscles (Bercher's operation). The chronic atonic dilatation was improved, but not cured.

The speaker quoted Boas to support his assumption that dilatation does not occur except as the result of stenosis. Because Boas says it is difficult to decide the question whether the case is one of atonic dilatation or pyloric obstruction, that does not dispose of the subject. Acute and constant attacks from childhood to old age from over loading of the stomach are quite sufficient to keep up this condition. These abuses are carried on through life, and as a result of gastric fatigue we have atony of the stomach.

With reference to pyloric spasm, in looking over the literature one would be surprised to see how much reference is made to this, with perfect assurance of its existence, and yet it is a difficult thing to decide that it occurs without opening the abdomen. Even then it remains a theoretical problem. It is true, the pylorus contracts when air strikes it, and appears under a condition of spasm, still it cannot always be absolutely proved that spastic contraction existed.

As to the question of obstruction of the pylorus due to spasm, it does not cause dilatation, but hypertrophy of the muscles, because there are periods of relaxation, and we must not expect, as Ewald points out, dilatation to occur frequently from simple spasm of the pylorus.

Cicatricial stenosis, scar tissue, ulcers located in this region, narrowing of the orifice and perigastritis are conditions which can be met by surgical means. Other forms of atonic dilatation of the stomach which require surgical interference are those in which interstitial growths occur; the stomach does not empty itself, and any amount of medical treatment will not relieve the condition, because there are pathological changes which occur in the musculature, such as fatty degeneration, and gastroenterostomy is indicated in these cases.

In many cases of acute dilatation of the stomach, general toxemia is present. Toxins in the general circulation are often excreted by the stomach and intestines. This may explain why acute dilatation is not always confined to the stomach. In chronic conditions, where there is more or less atony of the stomach and intestines, the excretion of the toxins may affect the gastro-intestinal musculature, and account for the weakness and atonic dilatation in many of these cases. If the toxemia originates from cholecystitis, then it appears perfectly rational that operation, which has for its object drainage, and sterilization by drainage, with removal of the cholecystitis, will cure the associated atony of the stomach and intestines, and this is proved by experience.

A paper was read on

The Mercurial and Iodine Injection Treatment for Syphilis.

By Louis E. Schmidt, Chicago.

It is not the object of this paper to exploit any one method of administering drugs, but to

show that it is a method which may be considered in every case and that the ultimate results will be as satisfactory as any or all other methods of treatment.

Numerous syphilographers have agreed that from the first appearance of the first roseola the maximum quantity of mercury is indicated, and the longer the period of time which has elapsed from this outbreak the smaller the quantity of mercury to be given, therefore a certain gradation of dosage during the intervening time. Measured from the period of the first eruption the quantity of iodine is gradually increased until the maximum doses are reached in the latter period.

The length of time which this "chronic interrupted plan of treatment" covers is variable. In uncomplicated cases, where no sign of syphilis follows the first general manifestations, five years treatment is not excessive, but when this is not the case, the five years treatment should be added to the last appearance of such a sign.

It is essential to have a definite plan of action in mind otherwise chaos would result. In regarding syphilis as a chronic eruptive disease such a basis can thus readily be taken, as certain eruptions, in a typical case of syphilis, appear at definite intervals. One of the objects in the "chronic interrupted plan of treatment" is to give the mercurial treatments at the time these outbreaks might be expected to make their appearance, commencing at the time of the first eruption.

Injections are given intravenous, subcutaneous and muscular. The manner is selected by the individual case. Where prompt and decisive action is wanted, in grave cases, the intravenous method may be adopted.

For all practical purposes all mercurial injection preparations may be placed in two classes, soluble and insoluble. Soluble salts can only be used in the intravenous method, and they are also to be preferred in the subcutaneous method, because the indurations are less, and besides resorption is more complete than if insoluble salts were deposited in the cellular tissue.

The insoluble salts should be given by the "deep" method, though both soluble and insoluble salts are given intramuscularly.

Of the soluble, 1-2 per cent solutions daily or tri-weekly injections may be made. Of the insoluble salts one injection every five days should be made. If it takes twenty injections of a one per cent solution to cause an eruption to disappear, a good rule is to give one-half this number more. The same holds true of the insoluble preparations.

Now what is the technique? The syringes and needles should be sterilized by boiling before and after using, and the preparations must necessarily be sterile. The field wherein the injection is to be made should be thoroughly cleaned. The gluteal region is the preferred area for the injection, being careful not to get too close to the sacral fold.

Iodine is administered immediately after the mercuric treatment, for a period equally as long as the mercuric course. In the chronic intermittent treatment a period of rest from all administration of mercury and iodine always

follows if possible. The iodine preparations are of great value when gummatous lesions are present.

A twenty-five per cent preparation of Iodipin is the only satisfactory one used for this purpose. Even when patients cannot take iodides internally on account of severe iodism, or for other reasons, Iodipin may be given subcutaneously or intra-muscularly. In the early period of syphilis only 2 to 3 c.c. twice a week for four weeks may be given. In the later period, especially where gummatous lesions are present it may be given as high as thirty c.c. daily.

The technique is practically the same as the mercurial administration. The syringes are larger and also the needles. If the Iodipin is warmed it becomes more fluid and can be injected with more ease.

If one considers that the entire treatment rests in the hands of the physician, consequently can be followed with scientific accuracy, it will be seen that the method can be honestly commended.

The meeting of Feb. 10, 1904, was devoted to a **symposium on kidney surgery**. Papers were read by M. L. Harris (see page 734 March issue); by Louis E. Schmidt on **the use of the cystoscope and catheterizing ureters as a means of diagnosis in surgical diseases of the kidney** (see abstract below); by Theodore Ticken on **cystoscopic examination as a means of diagnosis in surgical diseases of the kidney** (see abstract below.) The symposium was discussed by John B. Murphy and Gustave Kolischer.

Dr. Schmidt stated that examination of the bladder, catheterization of the ureters, examinations of the functional activity of the kidneys by examining separately the collected urines, especially with the aid of cryoscopy and radiography give almost certain information by which one may be safely guided in this field of operative work. As to cystoscopy, every diagnostician agrees as to its true value in this work. With the help of the cystoscope the presence of only one or two ureteral openings can be determined, and whether or not clear, turbid, blood-tinged, or colored urine is being secreted from one or both sides. The appearance of the ureteral orifices, torn after the passage of stone, as reported by Halban, inflammatory signs of the mucosa, or tuberculous processes, papillomatous growths about the urethral orifice may designate descending processes. After inhibition per mouth of methylene blue, the urine becomes tinged green in from fifteen to thirteen minutes in the case of a normally secreting kidney. The greater the amount of parenchyma destroyed, the longer the time which elapses previous to the appearance of the tinged urine. Voelcker and Joseph have injected 16 centigrams of indigo-carmin into the gluteal muscles. It begins to make its appearance in the urine in from fifteen to thirty minutes. It has the advantage of being excreted solely by the kidneys, and is harmless. The same authors gave individuals iodide of potassium and filled the bladder with a solution of peroxide of hydrogen containing starch. As soon as the iodide of potassium was being excreted, the urinary whirl became of a bluish

color. Where catheterization of the ureters or segregation is impossible or undesirable, where the ureteral openings cannot be seen, it is possible by means of a cystoscopic examination to make some deductions as to the functional activity of the kidneys when considering the foregoing points. Besides, it is possible to ascertain approximately the functional activity by watching frequency and force of each contraction, the quantity of urine which is expelled at each contraction of the ureter, and also some idea as to the ascent or descent of the whirl when the bladder is filled with fluids of varying specific gravities. Reference was made to the use of the different segregators. After considering the advantages and disadvantages of the various methods, the author said that ureteral catheterization is constantly becoming more popular. While he does not care to make a comparison of segregation and catheterization of the ureters, he believes there are but few, if any, authentic cases of infection of the ureter following catheterization. There can be no question in the minds of those who have followed the subject, and who have had practical experience, that the establishment of the functional activity by the examination of the urine gained by ureteral catheterization is the most important achievement in renal surgery. In addition, certain information which is of importance in every case is derived by ureteral catheterization, which any one of the segregators and cystoscopy alone cannot give. It is a method of diagnosis which can give valuable information in both ureteral and renal affections. Where a stone in the ureter has been diagnosed and the skiagraph shows it to be correct, Kolischer, Caspar, Hausemann, and the author have been able to inject sterilized liquid vaseline, which has been sufficient to cause contractions and to loosen the stone and cause the spontaneous expulsion of it into the bladder, and then subsequently to be passed naturally per urethram. It is not to be forgotten that when a catheter or bougie is in place, it can be used as a guide in ureterotomy, and also to locate and prevent traumatism of the ureter whenever bound down by tumors or inflammatory processes. Whenever performing a plastic or other operation, on the pelvis or kidneys, a bougie in place may serve as a guide. For draining the pelvis in cases of pyelitis and flushing it out and treating it, nitrate of silver, or other solutions have long been in vogue, and in some cases with positive results.

Cryoscopy.—Dr. Theodore Ticken read a paper in which he reviewed in detail the evolution of cryoscopy and the literature up to the present time. He sums up the conclusions of other workers along similar lines and compares the results with those he obtained. During the past eighteen months he has examined the blood and urine of 330 cases, making in all over 500 estimations of the freezing points. He finds that the results obtained by Koranyi, Kummel, Caspar and Richter, Rumpel, Tinker and others, are correct, and that the slight differences may be accounted for by errors in technique. He used the Beckman apparatus for both the blood and urine, and gives the normal freezing point of blood at 0.56 degrees C. below zero, as found

by previous workers. The urine, as collected for the usual twenty-four-hour specimen, freezes at 1.46 degrees C. in the average normal individual, but the normal limits vary from .98 to 2.56 degrees. He finds that the freezing point of the mixed urine does not give us much information as to the functional activity of the kidneys, and that a catheterized specimen from each kidney is necessary to be a help to us. The freezing point of the blood is nearly constant (0.56 degrees), and the normal variations are much less than in urine—.55 to .57, degrees C. being usually given, but we must not be misled by the variations occurring in the freezing point of this fluid, as it, too, is subject to outside influences. He thinks that cryoscopy will be of value to us in many cases, especially when used in connection with the other methods of diagnosis, as ureteral catheterization, the phloridzin test, and careful chemical and microscopical examination.

Discussion on the papers of Drs. Bevan, Harris, Schmidt, Ticken and Smith.

John B. Murphy: Mr. President, and members of the Society—After this great display of information and knowledge, it is a little difficult to decide where to begin the discussion. I believe, however, that we had better take up the diagnostic aids first, and after considering these briefly, we had better consider their application to patients in general, and finally, from a practical, surgical standpoint, consider the unit, the patient. The recent aids to diagnosis, as shown to you in this symposium, are very important factors.

The first important practical one is the cystoscope, which gave us very much information, because, after inspecting the condition of the bladder and determining that this organ is free from lesions of any and all kinds; from the appearance of the ureters, and the bladder area surrounding it, we are able to make a fair estimate of infective conditions above in the kidney and ureter and drained from the ureter into the bladder.

Following the information obtained by means of the cystoscope comes the next important aid from a practical, surgical standpoint, that of the Roentgen ray, both in the frequency of its application and utility, as well as in the positiveness of its appearances as shown by the excellent paper of Dr. Joseph F. Smith. The Roentgen ray gives us in a considerable percentage of cases in expert hands only, all the information that can be obtained with that instrument. However, considering the manner in which it is used in the average hospital and by the average man, it only gives us a small amount of definite information in the skiagraph. The Roentgen ray saves us from making many an error. It contributes very much to the comfort of the surgeon in attacking a kidney ureter for stone. The surgeon attacks it with a great deal more precision; he feels more certain of the final result, and he is less likely to leave a calculus in the kidney where one or more are present.

Ureteral catheterization is of greater value in the surgery of the kidney than the Roentgen ray, and this was clearly shown by the admirable presentation of the subject by Dr.

Schmidt. Ureteral catheterization, and under this heading I would include segregation, because it belongs to the same class, is applicable to practically the same conditions, and in given cases has certain advantages and in others disadvantages, as forcefully indicated by Dr. Harris. The more precise of these two aids, when it can be accomplished, is probably ureteral catheterization.

It is, however, more difficult of attainment than a satisfactory result with the segregator, particularly with the Harris instrument. But what is appalling to me is that these two instruments which have been demonstrated to us so long have been so slowly accepted by the profession, and are so seldom used, considering the valuable information that can be obtained by their use. It is scarcely pardonable, in doing surgery of the kidney, and, indeed, in doing general practice, where lesions of the kidney are recognized by the urinary findings—pus, blood, and altered urine—that the members of the profession should use these instruments so sparingly. Neither the segregator nor the ureteral catheter is difficult to use. They are not difficult of application, but are comparatively easy of application, and they are strikingly positive in their results.

Cryoscopy, the more recent aid to diagnosis, I believe, is going to fill a very important place in determining the capability or urinary efficiency of the remaining portion of the kidney after pathologic lesions have existed for a considerable period of time. This is, in our modern advances in surgery of the kidney, a very important factor. To avoid fatality, it is necessary to determine that the renal tissue remaining is capable of carrying on the function of excretion sufficiently to be consistent with the prolongation of life, and it will save us many a delay or fatal termination. Let me cite an illustration.

In a recent case of tuberculosis of one kidney that had existed for four years, in which it was clearly demonstrated that the other kidney was free from tuberculosis by catheterization, and where the quantity of urine which came from the diseased kidney was almost equal to the quantity that came from the healthy kidney (the quantity from the healthy kidney was 540 c. c. in twenty-four hours), it was important to determine whether the urine secreted by the healthy kidney was sufficient to sustain life if the diseased kidney was removed. After making an exploratory incision and determining by examination that a large portion of the cortical substance of the diseased kidney was still intact, I did not dare to remove the kidney. The cortical portion was tuberculous; the ureter was involved in tuberculosis clear of the bladder, as was determined by an examination previous to making the incision. I drained the diseased kidney for three months; this permitted a mild mixed infection of the kidney and a more rapid destruction of the cortex, subsequent catheterizations, showed increasing activity of the healthy kidney. It was successfully removed. With the cryoscopy we may be able to determine whether it would be consistent to remove one kidney, provided the function performed by the cortical portion

of the remaining one is sufficient to sustain life without this prolonged drainage and delay. I have been very much impressed with the statements of Kummel, who resorted to cryoscopy in five hundred cases, as reported in the *Deutsche Gesellschaft Chirurgie* last year, and it did not leave him in the lurch in a single case. That is striking. What is still more valuable to me, because a thing more easily applied, is the electric conductivity of the urine. Based on the same principle as cryoscopy, urine containing a certain number of soluble molecules transmits electric currents with definite degrees of exactness. Kummel carried on these investigations through his assistant, corroborating the statements of Lowenhardt, of Breslau, and said he could determine with equal exactness as with the cryoscope the secretive power of the kidney as manifested by the urine. Paul Richter of the Charite at Berlin also supports these statements. If, with that instrument we are able to obtain only a few drams of urine and can determine the secretive power of the kidney as exactly as we can with the cryoscope, it will be a great advance. I know of no one in this country who is using the instrument that Kummel has employed in his investigations. If it can be used effectively in Breslau, Hamburg and Berlin it can be used effectively in Chicago. Prof. J. H. Franz of Northwestern University has been experimenting for some time in this line and with results.

Now comes the consideration of the patient, and that is the principal element which was considered by Dr. Bevan in his excellent classification of the diseases and pathologic conditions. After we have determined all of these things with the instruments of precision, and the positive, valuable information which they give, we must consider the unit—the patient. Will the patient withstand, or will the patient not withstand, the procedures which are necessary for us to institute in order to relieve him of the pathologic lesion from which he is suffering? When the above positive information can be obtained by a large proportion of practitioners who have devoted special attention to it, then the advanced lesions of the kidney requiring nephrectomy will become less and less frequent. Surgical "conservative" judgment will be required in a greater degree the more precise our diagnostic abilities become, because then operation will be instituted earlier in diseases of the kidney, and we know that in removing the kidney nephrectomy is dangerous in proportion to the degree of healthy tissue in the kidney that is removed, and not in proportion to the degree pathologic destruction of the kidney removed. The mortality, from a general standpoint, of removal of kidney, where practically the normal secreting power is still intact, is about thirty per cent., while the mortality in those cases where the kidney is practically destroyed by pathologic conditions is about three per cent. So we can see an enormous difference in the dangers of the condition, and the reverse of what they are in usual surgical procedures.

Dr. Bevan has given us an outline of the number of surgical procedures that may be

undertaken in lesions of the kidney, but when we come to sift them down we will find that these procedures are confined to a very few conditions. From Dr. Bevan's statements of his experience, you can justly conclude that operations for renal malignant neoplasms are not desirable; yes, not justifiable. As a rule, they should not be performed, and for sarcoma practically never, because sarcoma of the kidney universally recurs in the other kidney. It not only recurs, but it becomes rapidly fatal, as every surgeon, who has had considerable experience, knows. I recall a case in point. It will illustrate how rapidly sarcoma recurs, after it has once been disturbed.

A boy had a tumor of the kidney (right) as large as an adult head. This tumor had existed for five years; it gave him but little inconvenience and trouble. In short, the inconvenience was so slight that it was thought the lesion of the kidney was not malignant, because he had remained comparatively well so long. However, I decided to remove it, and after doing so found it was a sarcoma. In a few weeks it recurred and the boy died promptly. How long he would have lived if I had allowed that kidney to remain without disturbing it, I do not know. But I feel convinced that I shortened his life by removing the sarcoma of the kidney. A diagnosis of sarcoma was not made previous to the operation; if it had been, an operation would not have been done.

Operations of carcinoma are a little more satisfactory. The common lesions we consider in surgery of the kidney are those due to retention and its sequences, and lesions of the pelvis from calculus, as well as the local condition of tuberculosis.

Tuberculosis of the kidney or of the upper urinary tract may be divided into tuberculosis of the ureter, tuberculosis of a circumscribed portion of the kidney itself, and a general tuberculosis of the kidney involving the pelvis and the renal secretive tissue.

I show you a specimen of tuberculosis of kidney tissue, showing how localized the tubercular process may be. You will notice a calculus in the ureter. The kidney is sacculated. The patient gave a history of urinary disturbance extending over a period of twenty-five years, with a sudden change in the condition. Eventually, there was elevation of temperature, rapid emaciation, more frequent urination, and a large quantity of pus. The circumscribed area of tuberculosis in this kidney is just at the side of the ureter and not larger than a walnut. This, I believe, is merely a secondary infection, with the tuberculosis involving only this circumscribed portion of the kidney. When tuberculosis involves only one or the other pole of the kidney, only the pole which is implicated should be removed, just as we remove tuberculosis from other portions of the body. When tuberculosis involves the ureter, some deviation of the ureter exit, or some other attachment of it should be made, perhaps a resection of the ureter, so as to retain the useful kidney. If with these instruments of precision which have been referred to tonight, and particularly cryoscopy and electric conductivity of urine, we are able to determine whether or not we can

dispense with one kidney safely; we are then justified in avoiding hazardous operations connected with the ureter, that will be a great step in advance. But I am more and more convinced from experience that we should have a law never to remove a portion of a kidney, even though it be not larger than a walnut, that is doing good renal work, except after the most patient analysis of the situation. Plastic Plastic work, which can be done to preserve secreting portions of kidney, is just in its infancy.

The lesions of the pelvis of the kidney are practically those of retention, mechanical lesions from deviations either in the attachment of the ureter or in obstructions of the ureter from foreign bodies, polypi, etc., and all these produce secondary changes in the kidney, but these secondary changes are the sequence of mechanical conditions which we must learn to overcome and overcome early. I know of no organ in the body, not excepting the stomach, that is as accessible to surgical intervention and manipulation as is the kidney. We have considered it difficult to reach in the majority of cases, but the kidney can be brought well out on to the surface, the pelvis exposed, opened, dissected, reduced in size, and the pelvis can be entirely excised, the secreting portion of the kidney retained, and the conduction of the urine from the healthy secreting portion of the kidney re-established. (Dr. Murphy demonstrated on the blackboard the surgical work that can be done to retain the secretive power of the kidney, and cited two interesting cases in point.) Two cases of resection of the pelvis of the kidney with reattachment of the ureter. I mention these cases to emphasize the point that, after we have determined with these instruments of precision the condition of the kidney, we have to consider the value of the remaining portion of the kidney, and in this work I have, for the first time, appeared in the role of extreme conservatism. I feel that this is one tissue of the body that we must respect, and I hail with the greatest enthusiasm the hope for valuable information to be afforded us by cryoscopy and electric conductivity. I also hail any information which will enable us by any means to avoid the removal of too much healthy tissue.

Gustav Kolischer: There is not much left to be said so far as surgical intervention of the kidney is concerned. However, there are two points I will discuss, and the first is with reference to anuria. I think it is just as wrong, as in obstetric practice, to try to force the indications within a certain limit of time. We cannot say that we should wait twenty-four or thirty-six hours before we operate on a case of anuria, and it is just as wrong to teach that we should remove the placenta if it does not come away within so many hours. These opinions are dictated by the indications of cases. I am quite sure, that our poor results from operating on cases of anuria, especially for calculous anuria, are due to the fact that we operate too late. If there is anuria, we should endeavor to find out as quickly as we can the cause of it. If there are any signs of inflammation, we should not hesitate to make

use of the cystoscope at once and catheterize the ureters. If there is obstruction by pus or stone, we should endeavor to remove it by injecting fluid, vaseline oil, salt solution, or anything which is sterile, or we may leave a permanent catheter in, because we know in many cases the anuria is simply a reflectoric one, after dilation of the ureter above the obstruction has taken place. Cases are recorded in the literature where the insertion of the ureteral catheter and leaving it in place a short time has started action of the kidney again. The indications are simply dictated by the conditions present.

As to tuberculosis of the kidney, all that Dr. Bevan has said in regard to the matter of general treatment, is true. But a good deal will depend upon whether or not there is a combination of bladder and renal tuberculosis. We know that in females tuberculosis of the bladder may exist for years and cause the patient very little or no discomfort. Quite often tuberculosis is detected only accidentally, and if we begin to treat such a patient, she becomes worse, but if let alone, she may live for years. Dr. Baum and I know of a woman in this city who has had ulcerative tuberculosis of the bladder for years, and she has gone along in apparently good health. This condition was discovered accidentally four years ago. But if, as I have previously said, tuberculosis of the bladder be combined with tuberculosis of the kidney, or vice-versa, we have to operate for two reasons: First, the condition becomes unbearable to the patient. Second, if there be tuberculosis of the bladder confined to the ureteral papillae, due to secondary infection from the kidney, if the kidney is removed, the patient will be cured.

So far as diagnostic means are concerned, since Dr. Harris has made a success of the segregator, there has been an inundation of different segregators, constructed on the same principle first advocated by Neumann. I agree with Dr. Schmidt that segregation will never become an independent method, and it should always be accompanied with or controlled by the use of the cystoscope. There are instances on record in which segregation has proved very unreliable and if any of you will peruse the literature on the subject you will find that there has been quite a re-action against the use of segregators among urologists, who practice cystoscopy and ureteral catheterization extensively, as well as segregation. It is not uncommon to find combined with kidney diseases a ureteritis situated low down, just at the vesical portion of the ureter, the ampulla which is involved. We can overcome this source of failure in examining them easily by ureteral catheterization. It is absolutely necessary in all cases, where there is a suspicion of disease of the ureter, to flush out the ureter first, as we do not want to have the urine contaminated with all of the excretions from the lower ureter.

So far as hematuria is concerned, I believe we should make use of the tuberculin test in cases of renal hemorrhage. We know that tuberculosis of the papilla of the kidney may not be detected by the usual tests for that disease, whereas, if we use the tuberculin test, tuberculosis can be detected.

With reference to cryoscopy, it would be all right if two conditions could be fulfilled. One is to have an instrument which is absolutely perfect, but at present there is no instrument that is really reliable. Second, we work at a great disadvantage. It takes an expert physicist to handle the cryoscope and obtain reliable results with it. Every physicist will tell you that he can distinguish exactly up to one-thousandth of a degree the changes in freezing point. The reports given by medical experts, so far as the freezing point of blood, urine, or any other fluid is concerned, vary as much as hundredths of a degree. This shows how unreliable cryoscopy is. Furthermore, Kuemmel is always quoted as having made so many cryoscopic examinations, and is said to have obtained favorable results. That may be true, but there is one point which is overlooked, namely, that Kummel's assistant, who makes these examinations, is an expert physicist. Cryoscopy will always be reserved for experts and even then the practical application of its results will always be of rather problematic value. The same holds good of electric conductivity and the application of modern electric theories on practical medical problems. It takes a very sensitive, and I might say, whimsical, apparatus to make all these tests, and only an expert physicist will be able to get useful results. I am rather afraid that Dr. Murphy will be disappointed after he gets his electric apparatus and puts it to use. So far as the cystoscope is concerned, it furnishes the greatest exploit in diagnosis of the lesion of the bladder, ureter and kidneys. Dr. Murphy is quite right in saying that it is surprising how the cystoscope is not being used more generally among the profession. I am teaching cystoscopy for more than ten years and can give some reasons for that. One of them is that a great many of the instruments which are recommended and used by some are not suitable at all. If a man has seen a patient tortured by a Rochester cystoscope, or a woman undergo a Pawlik Kelley cystoscopy, he cannot feel very encouraged to take up these methods. But if you will use modern cystoscopes built after Nitze's principles, you certainly will be satisfied by using this same satisfactory and innocuous method.

As to the use of the X Rays as an aid in diagnosis, it is rather satisfactory to state that at least a part of the progress was accomplished here in America. At a time when Casper and other prominent European urologists still maintained that kidney or ureteral stones can only be detected by the use of X Rays through a lucky accident, here in America, especially here in Chicago, we already knew how to appreciate and recognize the refined method of radiography as a reliable means for diagnosis. All the above mentioned methods used together certainly furnish satisfactory results and will help us to carry on a splendid work in this line, which in this town was first started by Fenger and continued by McArthur and Bevan and lately taken up by Murphy.

The meeting of March, 1904, was devoted to syphilis. Cases were presented and remarks made as follows:

Cerebral Syphilis.

Hugh T. Patrick: Mr. President. This woman is now forty-one years of age. Very briefly stated the principal points in the case are as follows: In 1899 she began to suffer with dizziness, failure of vision, intense headaches, and considerable mental and physical hebetude; that is, she was drowsy and mentally dull most of the time with pronounced lassitude. Following that she developed double vision, which lasted for a few months and her acuity of vision diminished rapidly. This is all founded upon her statement, of course, and probably bears the ordinary inaccuracy of such a statement of the patient. After having had this trouble for some little time, and owing, she thinks, to her diplopia, she sustained a fall, and was unconscious for a short time; she does not know how long. It is a question whether she fell in consequence of poor vision or as a consequence of the cerebral trouble; I think most likely the latter. When she regained consciousness there was some vomiting. One month after this she had another fall, and was also unconscious for a short time. During all this time the severe headaches continued. After several months of headache, hebetude, diplopia, and the two unconscious attacks, she was removed to St. Luke's Hospital, and on the day following her arrival became unconscious and remained so for twenty-four hours. She vomited just before she became unconscious. When she regained consciousness, she says everything looked blurred. She was unable to turn in bed; she could not move the left side at all. In other words, there was a left hemiplegia. It is noted that when she had the first fall, the left leg was weak, as well as the left arm. According to her statement, the arm became weak first, then the leg; at that time the face was not involved. As she recovered from this more severe attack, swallowing was exceedingly difficult; her speech was disturbed, and that is about all we know. Probably there was no aphasia, but simply alalia, trouble in articulation, owing to paralysis of the tongue, lips and throat muscles. There is a distinct statement that with the left hemiplegia there was very marked sensory disturbance; marked anesthesia, which continued for a considerable time, and even two years after the attack, when she had regained very remarkably good use of the left side, there was still considerable subjective sensory trouble on that side, and a very little objective trouble; that is, there was very little, but some, anesthesia, and some disturbance of the sense of position and of co-ordination on the left side. Although the gross strength on the left side is very good indeed, that is, the grasp of the hand is good and there is practically normal strength in the lower extremity, there is not nearly the normal accuracy and delicacy of movement. As she walks down the aisle, you will notice that there is exceedingly little hitch in her gait. She uses the left hand for all practical purposes, only it is not as dexterous as it used to be, and feels queer. I do not see any difference in the two sides of the face. She has a complete homonymous hemianopia. The visual field of either eye is perfectly normal on one side, but absolutely gone on the other. That is, to the left she sees nothing with

either eye; to the right she sees as far and as well as anyone.

This case illustrates very well, on the whole, that the prognosis is exceedingly good when these cases of brain syphilis are taken in time. But when there has once been destruction of tissue, it does not make any difference what the cause has been, the effect is permanent, and as the result of her trouble she has permanent hemianopia, although her hemiplegia has almost entirely recovered. The combination of hemiplegia with homonymous hemianopia makes the localization in her case very easy. (Here Dr. Patrick demonstrated the location of the lesion on the blackboard, showing it to be just posterior to the posterior limb of the internal capsule which it had involved to some extent, and cutting the optic radiations of Gratiolet.)

The only other point I wish to make concerning this patient is the fact that she was absolutely and entirely ignorant of any specific infection whatever. She has been under observation most of the time since 1901. I have had many interviews with her; she has been candid with me, and she is absolutely ignorant of any initial lesion or of any other lesion which would point to specific disease, and that is a point well worthy of consideration. I think a good thumb rule is to take absolutely no account of a negative history of infection, especially in women. The symptom-complex itself is so exceedingly characteristic that one should pay no attention as to whether or not it was likely or unlikely, whether affirmed or denied, that such a thing as primary infection occurred.

Hereditary Syphilis.

This patient is even more interesting and instructive than the other, but in an entirely different way. She is now twenty-one years of age. Her mother is at present suffering from typical tabes, with complete optic atrophy. The oldest child, a son, died about two years ago of general paresis, that is, precocious paresis. Today I happened to see Dr. Moyer, who had previously been interested in the same family. He saw the oldest brother before his death, and said the case was one of perfectly typical paresis. The next child, also a son, is at present suffering from tabes, with optic atrophy. This is the third and only remaining child, who, as an infant, had snuffles, who later developed mucous excrescences about the anus. To put it broadly, from the statements we got from the family, these excrescences were probably of a condylomatous character. Two years and a half ago she had a typical bilateral interstitial keratitis, but up to three years ago, aside from the rather apparently trivial ailments in childhood, she was perfectly well. She was clear mentally, and well physically. When about eighteen months of age she had what was then diagnosed as chronic hydrocephalus; that is, a large and not well-formed cranium. Rather more than three years ago she began to suffer with headache and drowsiness. One day, while sitting on a door step, she had a sort of stroke without loss of consciousness. She said she became weak on one side, more especially in the face. The statement is made that the right side of the face drew. As we know from experience, that probably means that the right side of the face

did not draw, but that the left did. The patient had a queer feeling of disability on the right side of the face and consequently says it "drew," whereas it was paralyzed and the left side acted alone. That was a transient attack. The next morning she had another stroke which involved all of the right side, but the right side was only a little weak. It was not paralyzed, and that attack was transient. A month later she had another attack of right hemiparesis a little more severe, and three months after that a fourth attack, which was very severe, and which left her completely hemiplegic on the right side with aphasia. First the face, then the arm and leg were involved. From this she recovered except for some weakness and stiffness. A year and a half ago she developed an entirely new set of symptoms, symptoms which are not very rare with this trouble, whether of specific origin or not. I apprehend that this young woman had active specific trouble in the cranial cavity, and whether it was anything more than a specific arteritis I would not say, but certainly, in consequence of it, she had four attacks, the last one caused by thrombosis of a large vessel on the left side, and from the irritation of the scar left by that vascular occlusion, she began to develop, a year and a half ago, typical Jacksonian fits. These fits start by twitching and drawing in the right side of the face, which then extend to the arm (the arm center adjoining the face center in the cortex); then spread to the leg, the leg center being next, and then she has a general epileptic attack. Sometimes it does not go so far; she has a lesser attack. The face and arm, perhaps, are convulsed, with no loss of consciousness, and that is all there is to it. Sometimes she has a severe attack which terminates in a general convulsion. In the beginning there is no loss of consciousness and the fit begins in exactly the same way, the spasm preceding very appreciably in time the loss of consciousness. As the French put it, the patient "assists" at her own attack; she is conscious of what is going on for a considerable time.

There are other features of this case that I might call attention to, notably the teeth. She has not only defective teeth, but the lateral incisors are pretty nearly typical Hutchinson teeth. The central incisors are not typical, although there is a notch on the anterior surface, not on the free border. She has osteophytes on either shin. She also has a disseminated choroiditis.

The whole family is a very unusual display in many respects. But this is the only child who shows unmistakable marks of hereditary syphilis, and the question arises whether the two boys, the older children, inherited their syphilis, or had it communicated to them when they were children. Either case is possible; but the family shows the relation between specific diseases, tabes, and general paresis. The mother of the patient states that the father, before his death, confessed to having had syphilis.

L. Blake Baldwin: I have brought this Chinaman before the Society for a special reason. In two years I have treated eleven cases of syphilis in Chinamen. I have odds to contend with in this case, because I cannot get a

history. However, I have not found any difficulty in curing these cases because I have given all of them iodide of potassium. A week ago this man could not move his right leg and right arm, but now he can move both of them a little. I brought the case here for diagnosis. I venture to say, that 90 per cent of the cases of Chinamen that come to us have syphilis, and when I am called in to treat a case of a Chinaman, without securing any history, I try one drug, and then another, and usually if I give iodide of potassium I get pretty good results in most cases. When these cases are presented for treatment, with no history, and they have facial paralysis, or paralysis of the arm and leg, or large ulcerations on the leg, I think it is wise to give iodide of potassium.

I would like to have any of the members examine this Chinaman carefully and make a diagnosis. I would like to have Dr. Patrick examine the patient and then tell the Society what he thinks about the case.

I have gone over this case rather hurriedly, and find that the man denies any initial lesion, but, as Dr. Patrick has told us in presenting his cases, that the statement of the patient in this respect should not carry great weight. This man has improved considerably under the use of iodide of potassium.

Case 2. Here is another case which I have diagnosed as syphilis, but I may be wrong. This man says that he had a chancre eighteen years ago. He is a musician by occupation. This affection of the eye came on suddenly one night. It is a question in my mind whether this is syphilitic iritis or not. He has improved under the use of iodo-nucleoids. This is another case I brought here tonight to try and get a diagnosis of it. I have had one case that was practically the same as this that made a perfect recovery. This man expects to recover. He did not have this iritis when he came to the Samaritan Hospital. About five years ago he had a paralytic stroke on the left side, so that he could not move his fingers, but the paralysis lasted only half an hour.

Case 3. I promised Dr. A. E. Baldwin that I would show some cases of syphilis of the mouth. I have seen a good many of them during the past year. This patient, a man, had a chancre fourteen years ago. He said he has never had an eruption on his body, and previous to that he had no sores. Since then he had two soft sores (chancres) about a year ago. These were burned off by a physician, who used aristol powder. There is considerable redness of the hard palate; the fauces are congested; there is a gumma along the posterior wall of the pharynx.

I re-call two cases in which there were secondary eruptions, and mucous patches, the men having had syphilis twelve or fourteen years before. I believe mistakes are frequently made in diagnosing syphilis from the initial lesion, thereby placing patients on a false basis. I had a theatrical manager in my office last week with a typical secondary eruption, with mucous patches in the mouth. He told me he had been taking drug treatment for ten or twelve years. He had a chancre, secondary eruptions, and mucous patches in his throat.

Whether this man's case was diagnosed correctly in the first place or not, I do not know. At any rate, a diagnosis was made in Bellevue Hospital from the initial lesion. Whether he was cured of the first attack of syphilis, and this another attack, I do not know. I informed him that he had this disease, and that was enough for him. He knew, apparently, as much about the pharmacopoeia as I did.

Hereditary Syphilis.

Frederick Menge: The first case I wish to present is that of a boy, twelve years of age, who has hereditary syphilis. He has a syphilitic gumma, in active cell proliferation in the nose springing from the septum on both sides, entirely filling the inferior meatus and occluding both nostrils. The boy also has had extensive ulcerations of the soft palate, the uvula being absent, in consequence.

The next case is that of a young man who has immense syphilitic eschars on the soft palate, also on the hard palate. His uvula is also gone from syphilitic erosions. In this case the infection occurred thirteen years ago, while the ulcerations that caused the scars occurred three years ago.

The third case is that of a man for whom we are indebted to Mercy Hospital, who has paralysis of the left vocal cord caused by the pressure of an aneurysm of the arch of the aorta on the recurrent laryngeal nerve. The aneurysm being probably due to a specific degeneration of the vessel walls.

The fourth case shows a septal perforation including both cartilage and bone, the patient denies all syphilitic history but a perforation of the septum involving the bony portion, excepting from trauma, is pathognomonic. Such a condition as this is the forerunner of the saddle back nose.

To properly see these cases I have arranged some lights, mirrors, and instruments in the rear of the room where I will be glad to demonstrate them.

Remarks by George F. Suker.

An interesting case of Inherited Syphilis.

This little lad of seven years whom I wish to present, is to me an exceedingly interesting case of hereditary syphilis. Interesting, because he has as typical syphilitic head lesions as any one wishes to see. One seldom sees such a marked example of the so-called Hutchinson's head. The lesions began to develop in the second month after birth with the classical snuffles and solitary anal condyloma. The interstitial keratitis began at the end of the first year. He has the Hutchinson triad, namely: interstitial keratitis, saddle nose (due to the implication of the Schneiderian membrane), and partial deafness (resulting from an otitis media). He has had bilateral dacryocystitis, with occlusion of the nasal duct, secondary to the necrosis of the nasal bones. He has the marked frontal bony protuberances and the flat crown of the head so-called billiard table head. His hair is very scant and exceedingly dry. His upper jaw is atrophied and there are scars at the angle of the mouth, underneath the tongue, and in the pharynx. There is present the characteristic dental caries of the few remaining lower front teeth. The

deep cervical glands are somewhat enlarged and the tibia is a trifle nodular; however, there are no nodes in the humerus. Furthermore, he now has syphilitic ozena and a fresh attack of keratitis. The sclera has that peculiar bluish cast indicative of the proliferation of the choroidal pigment into the sclera as a result, perhaps of anterior uveitis, so common in this class of cases. Finally the high arched palate is also present.

The patellar reflex is not absent nor in any way abnormal. Drs. Lang and Wood of the Royal Ophthalmic Hospital found (see reports of 1888) this reflex absent in a large proportion of cases of interstitial keratitis. According to them this reflex is abnormal in from thirty to forty per cent of the cases. My own personal experience with rather a large number of cases does not confirm this finding.

Perhaps the chief interest in this case centers in his teeth, the so-called Darier-Hutchinson molar. The first molar presents the same alterations as the classical canines and incisors (absent though in this case). This molar has four little tubercles of dentine, one at each cusp of the tooth. The enamel at this point is wanting. The tooth has, as it were, four yellowish prongs (patient passes around to members of the society). This marking of the molar is as characteristic of inherited syphilis as any other dental lesion. It has not, however heretofore been recognized.

The prognosis, so far as the sight is concerned is not as gloomy as might be expected. Under the appropriate treatment a "working" amount of vision is usually retained.

This boy certainly is a typical case in every particular of inherited syphilis. Only one parent was syphilitic.

Syphilitic Iritis.

With Dr. Fischkin's permission and kindness I will present his case of syphilitic iritis in connection with my own (referred to me by Dr. Baum). These two cases present two distinct types of iritis. The one plastic iritis and painful, the other serous and not painful—so-called quiet iritis. The latter one is the more serious as often the eye goes on to practical blindness without the patient being aware of the condition. In the case of the quiet iritis there is scarcely any iris discoloration, while in the other there is very marked discoloration. Yet in both there are extensive posterior adhesions of the iris. In each the iritis is not so frequent a form in syphilis as in rheumatism.

In treating these attacks of iritis, the classical treatment by atropine, hot application, and rest, will enable these patients to get well, despite the fact whether you give them potassium iodide and mercury during the attack or not. Relapses are very prone to occur in this variety of iritis. Syphilis is the etiologic factor in about seventy per cent of all cases of iritis.

Syphilitic Purpura.

E. A. Fischkin: This first patient gives a history of having had a primary lesion some twelve years ago. He says the lesion was not distinctly syphilitic, one physician said it was a hard chancre, another said it was not. He had no anti-syphilitic treatment at that time.

The eruptions which followed disappeared spontaneously and he was free from manifestations of the disease up to five months ago when purpuric spots began to appear scattered over the lower extremities. Eight weeks ago a tubercle appeared on the left side of the nose being rapidly followed by others. He then sought relief. When he first came to my office, the affected side of the nose was covered with typical circular ulcerating tubercular syphilides, extending from the labio-nasal fold to the margin of the nasal bone. These ulcerating tubercles have now healed under treatment and you can see the scars left behind them.

The fact that the patient never had any anti-syphilitic treatment induced me to put him on a mixed treatment, giving him the iodides internally and mercury by inunctions. After three inunctions the arm and leg, the parts treated, became covered with a petechial eruption, of various sized and colored spots, the color being more deep and the spots somewhat elevated around the hairs. I had then discarded the inunctions and administered mercury by the mouth. The purpura began to disappear and new lesions did not come. But, last Sunday there came a new crop of purpura all over the leg after a very hot bath which the patient had taken on Saturday.

The question is, am I justified in calling this case syphilitic purpura? Is it a manifestation of the disease due to an alteration of the blood, as diminution of the corpuscles, which can easily pass through the walls of the vessels; or to a structural change of the blood vessel-walls as thinning and fragility which admit hemorrhagic effusions into the skin? Or, is it the toxic effect of the treatment, of the iodides or the mercury which both are capable of producing purpura?

The fact that the first petechial eruptions appeared on this patient without any therapeutic provocation, justifies, I believe the diagnosis of syphilitic purpura, due to the disease itself while the subsequent eruptions may have been provoked on this vulnerable skin by external applications.

Case 2. This girl presented herself at the Hebrew Charities Dispensary some six weeks ago. The interest in this case lies in the age of the patient, she being only fifteen years of age. She presents a typical tertiary syphilitic ulcer of the leg. When she first came, the ulcer was much larger; it was punched out with gummatous edges. In the neighborhood of the ulcer there are scars from previous lesions, which leave no doubt as to their syphilitic nature. They are characterized by atrophy, sharp contour and pigmented areola. Judging from these symptoms, you will, I believe, agree with me that these scars are two years old at least. The family history is entirely negative. Now she is only fifteen years of age. If she has acquired syphilis, she must have had the primary infection when she was ten or twelve. There are no signs of hereditary syphilis, not a trace of Hutchinson's Trio. She has had this ulcer on the leg a year and a half.

Case 3. This patient came to the Hebrew Charity Dispensary nine months ago, with a discharge from the urethra. He was treated

for gonorrhea. The discharge was sero-mucous. There was quite a heavy sediment in the urine. The urethra was entirely closed by a nodular induration around the meatus, and the glans was ulcerated to almost the same extent as you now see it. The inguinal glands were swollen, soft, and painful. The other glands, cervical and cubital, were typically syphilitic-indolent, flat and hard. The fact that I could not find the gonococcus in the pus, and the general adenopathy made me suspect at the time a syphilitic chancre, in all probability a mixed one, because the inguinal glands were soft, and suppurating. I gave a mild astringent injection; which cleared up the urine and in a few days the discharge from the urethra disappeared. But, the induration remained. The patient had considerable pain in urinating. There was almost complete obstruction, so that I had to perform a meatotomy, and introduce sounds. This relieved him of his difficulty in urinating, but the ulcers around the meatus did not heal, and all kinds of applications with a few to promoting epidermization were without effect. The diagnosis of syphilis was corroborated very soon by the appearance of a maculo-papular eruption which appeared four weeks later. I put him on anti-syphilitic treatment and the manifestations of syphilis disappeared. But the induration of the meatus remained without any change; the ulcer of the glans did not heal. It presented granulations quite flat and healthy looking, if kept clean, surrounded by a ring of elevated callous tissue. The callous edges, I tried to cauterize with Nitric Acid and also tried to scrape them off but without much effect. I then sent him to the hospital for the purpose of making skin transplantations of these parts. He came after six weeks in the same condition as he was before. For the last two weeks I have applied X-ray radiations, and after six treatments the epidermization seemed to have started. The callous edges have entirely flattened down and on one side especially you see a considerable area covered with young epidermis.

Case 4. I saw this patient (a Negro) for the first time at the County Hospital today. It is to my mind a case of secondary syphilis, and the reason I brought him here was to illustrate the peculiarity of syphilis in the negro. Since I have had the opportunity of observing these cases, I have noticed that almost all negroes which have come to our ward present the destructive form of the disease in the secondary stage, as well as in the tertiary, the gummatous lesions being very destructive, and the secondary lesions chiefly pustular, leaving in the majority of cases deep scars. The case has gained for me, this evening, an additional interest since one of the gentlemen present has said that "the patient was presented at the St. Luke's Hospital two weeks ago, for diagnosis and that the diagnosis at that time laid between syphilis and small-pox as the eruption was pustular, particularly, partially umbilicated and the primary lesion was not distinct.

The secondary eruptions in our negro-patients were nearly always pustular. Sometimes the pustules appear without papules. If papules form, they break down rapidly. In this

case there are many papules covered with crusts of dried up pustules. There are no fresh pustules. I believe this case substantiates the statements of the more destructive effect of syphilis in the negro, which were emphasized at our last annual meeting by Dr. Jones, of Memphis, in his paper on "Syphilis in the Negro."

Case 5. This case from the County Hospital. Notice the ulcers, covered with thick crusts, arranged in a circinate form. In the center of the lesions you see typical syphilitic scars, with atrophic skin in the center, and pigmentation around the scars. This is undoubtedly a case of tertiary syphilis. Patient denies ever having had secondary lesions of a primary infection. These lesions began to appear a year and a half ago.

The other case we have here is a case of secondary syphilis. It is more interesting for the Ophthalmologist on account of its complication, iritis.

Syphilis.

David Lieberthal: The case I present to you is a comparatively simple but instructive one, from a differential diagnostic point. She is forty years old, and does not remember ever having had any skin lesions before, or any symptoms suspicious of syphilis. By her first husband she had three children, who were born healthy, at full term, and have remained so. They are now nine, twelve and eighteen years old respectively.

Five years ago she had a miscarriage, and soon afterward her husband died. He, as she remembers, was repeatedly treated for a bad disease. She again married. Her present affliction dates six months back, when it started on the nose and spread over the face and right ear. Not very long afterward an eruption occurred on her right arm and back. At present we see the nose and adjacent parts of the cheeks brownish-red, and diffusely infiltrated and covered with thick yellowish-brown crusts. After their removal, small ulcers with densely infiltrated margins appear. The lesions on the back show the same appearance, but are more distinct, as are also those on the arm, the latter having more the appearance of a tubercular eruption. Everywhere there is a tendency to grouping. Between the pustular lesions, flat smooth scars are noted. The patient's affection was diagnosed as lupus vulgaris, inasmuch as the facial localization presented the butterfly appearance. She was accordingly subjected to the X-Ray, but without any result.

Lupus vulgaris can be excluded, for the following reasons: It begins, as a rule, before puberty. It could not develop to such an extent within six months; its lesions show lighter coloration; the crusts are yellowish and not as thick as in syphilis, and the resulting scars are not smooth and shallow as in syphilis.

Hugh T. Patrick: After examining Dr. Baldwin's case of the Chinaman, said: I should say, that this is a case of thrombosis of the Sylvian artery, with right hemiplegia and aphasia. It is not a pontine lesion, the characteristic of which is crossed or alternate paralysis; that is, of the face on one side and the extremities on the other. But in this case the face, tongue, arm, and leg are all paralyzed on the same side.

I learn from Dr. Stowell, who saw the case early, that there was not loss of consciousness when this came on. In my opinion, that settles the question between hemorrhage and thrombosis, as a hemorrhage that will produce complete hemiplegia always causes more or less unconsciousness. There is one thing that possibly might mislead one who does not see many such cases; namely, the tongue deviates much more than it does ordinarily at this time; that is, three months after the stroke. And it deviates toward the paralyzed side. This might lead one to suppose that the tongue was paralyzed on the opposite side, but such is not the case, as the tongue is not normally pulled out, but pushed out. In this patient therefor it is simply pushed to the paralyzed side on account of the better action of the muscles on the sound side. This patient presents, in addition to the other symptoms mentioned, increased reflexes, and the typical Babinski sign on the paralyzed side.

David Lieberthal: I would like to say a few words in reference to Dr. Baldwin's case, in which there are lesions in the throat and on the tongue. There is no doubt in my mind that the lesions in the throat are specific, but I would be inclined to consider those on the tongue as leukoplakia.

The third case demonstrated by Dr. Fischkin I had the opportunity to see at my clinic about a year ago, after he had made the round of a good many other clinics. The lesion then appeared nearly the same as seen tonight. I could not at that time induce the patient to let me remove a piece for examination, inasmuch as he was suffering considerable pain. Considering the lesion extending into the urethra, I directed him to inject at regular intervals a mild antiseptic solution, which was also used on the glans. After a few weeks' treatment he disappeared. At that time I had an opportunity to see the same islands of young epithelium within the vegetating area as described and seen tonight.

If the lesions now present followed directly upon a primary lesion, I do not understand why it should be non-infectious. The case did not impress me as one of syphilis.

If an ulcerating primary lesion does not heal in a reasonable time, say three or four months, there must be something wrong. I would suggest that, if possible, a piece of the vegetating surface be excised for examination. I do not believe that this is a tuberculous process, but I am inclined to think of epithelioma. In the latter case the treatment is obvious.

Should it prove to be benign, then I would suggest to keep the patient in a hospital, and the member in the continuous water bath.

L. Blake Baldwin: I disagree with Dr. Patrick in regard to the case of the Chinaman. Dr. Patrick said to me that he did not think this man would iron any more shirts with the arm he has. I think he will be able to do so, judging from my experience in treating similar cases.

I disagree, too, with Dr. Lieberthal, as I think my diagnosis was correct. I have reference now to the man whom I exhibited with mucous patches on the tongue and pharynx.

I have very good reasons for thinking that my diagnosis is correct, and I do not think Dr. Lieberthal elicited all of the points in the history of the case that I did; but my diagnosis is not based entirely on the history, but on the appearance and location of the lesions. I have seen a good many cases of leukoplakia which resembled this case, but I have never seen a leukoplakial condition that looked entirely like this. Besides the condition you see on the tongue, there is a typical gummatous condition in the throat.

With reference to one of the cases reported by Dr. Fischkin, I think the St. Luke's Hospital people showed good judgment in thinking possibly that the case of the colored man was one of smallpox and sending for the Health Officer, thereby relieving that hospital of the responsibility of making a mistake and sending the patient down to the City Hall, etc. I have no doubt many mistakes are made in the diagnosis of smallpox and papular and pustular syphilides, so we cannot exercise too much care in such cases.

With reference to the cases exhibited by Dr. Menge, I do not know the treatment he has been carrying out, but in such cases I rely on hypodermic treatment with the administration of iodide of potassium internally; but my chief reliance is placed on hypodermic treatment and the use of bichloride of mercury.

Dr. Patrick: Why do you think the Chinaman will recover, and what are your reasons for so thinking?

Dr. Baldwin: I have had eleven cases in Chinamen with the same lesions, and all of them recovered under iodide of potassium treatment, etc., and I go on percentage. (Laughter.)

Dr. Fischkin: With reference to the remarks made by Dr. Lieberthal in regard to the ulcer of the glans I must say that he misunderstood the presentation of the case. I did not present the case as a syphilitic ulcer. There was a mixed chancre of the meatus. And, the syphilitic manifestations later proved the syphilitic nature of the chancre. You can now see that there are still some scattered papules on the skin and also mucous patches in the throat. Every physician who has seen cases of this kind, has observed that a sore or chancroid of the meatus will produce erosion or ulceration of the glans which heals slowly. Healing cannot take place rapidly; though the granulations are quite normal they do not cover with epidermis. The new epithelium, which comes from the edge, is washed away by the urine or by the secretions, and because the granulations cannot cicatrize they stimulate the edges to formation of epithelium which accumulate on the edge in the form of a callous ring and forms the callous ulcer.

In regard to Dr. Lieberthal's personal remarks, I did not mention his name in connection with the case I reported. I said the patient was treated for gonorrhea because this was his statement. I never asked him who had previously treated him. We have not time to ask our dispensary patients by whom they were previously treated.

PHYSICIAN'S CLUB OF CHICAGO.

A regular meeting of the club was held February 16, 1904, at the Sherman House, with Dr. Hugh T. Patrick in the chair.

The subject of the evening's discussion was Graft.

The Chairman introduced Mr. Walter L. Fisher, Secretary of the Municipal Voters' League, who spoke on **Municipal Graft**.

Mr. Fisher said: Graft is as old as the pyramids. It has existed in all ages. It exists in Rome, in London, in Paris, and other countries and cities. It is coincident with municipal government. Municipal government has always been what we might consider an unsolved political problem; but the government of States is almost a fixed political question. One of the most serious questions that confronts the people who are interested in the future of their own country is the future of our great city. Municipal graft, therefore, is an important subject. The organization to which I belong is not one that is interested in a theoretical discussion of graft or any other problem of politics. It is an intensely practical organization, and turns its attention to the practical methods of improving conditions, and therefore I am entirely unfamiliar with and can throw very little light on a theoretical discussion of graft.

Graft naturally divides itself into petty graft and the larger graft, with which, in this city, happily, we have less to do than we used to have. I think it can be said that graft in its larger aspects has been thoroughly rooted out from the City of Chicago, and what we have to do with today is petty graft, administrative graft, which extends through all departments of the city offices. We always come in contact with it, more or less, and the subject has been so thoroughly discussed in the public press that it would be a work of supererogation for me to undertake a detailed discussion of graft at this time. You know that it exists particularly in the departments of inspection, and in many other branches of the city government, but we will find that it exists most in those departments which come most intimately in contact with individuals—the people. It exists largely because of laxity, of utter inefficiency in matters of administration. There is lack of adequate supervision on the part of gentlemen in charge, who think their entire duty is performed when they have selected a head for each department. Having selected such men for these departments, they are allowed to work them as they see fit. If he does not overstep the bounds of reasonable discretion, the head of a department is allowed to carry on his nefarious practice without hindrance by the powers above. The foundation of graft is the self-consciousness of the individual voter; it is the self-consciousness of the individual member of the community, a selfishness which expresses indifference to public duty; willingness on part of the individual to escape responsibility, but an unwillingness to assume active duties.

Without desiring to lose what friends I may have in this Club, I want to say that the medical profession is singularly open to that criticism. There is no class of men in the community who can exert greater influence in up-

holding good government than the physician, yet I think no class of men in the community exercise their powers less in proportion to their ability than the members of your profession. The relations which the physician has to his patients, and the large number of people with whom he comes in contact, afford abundant opportunities for doing great good. Such opportunities should be constantly exercised and taken advantage of more generally than they are. There are very few physicians in this city who have ever taken active interest in public affairs to any thing like the extent they should. It is an acknowledged fact, so far as my recollection serves me, there has never been a member of the medical profession in the City Council. There has not been since my connection with that body. We all know doctors are busy men, but so are lawyers busy men, so are the members of other professions. These men give a certain amount of their time and attention to the work of the city. It is true, we have had a number of physicians from time to time on the Library Board and the Board of Education who have done excellent work; but we have never had a physician in the City Council since my connection with that body.

The future of our great city will depend very largely upon the demonstration of our ability to work out some system of government which is reasonable, and under which we are willing to live. We have had all sorts of schemes of administration of municipal government suggested to us. We have had autocratic and oligarchic schemes presented to us, as well as purely democratic devices, yet this and other cities have increased greatly in population. But the problem of how best to govern a city like this becomes increasingly difficult. There are many men who say it is impossible to solve the problem, who regard the future of our country with apprehension. They are despondent. It seems to me, to a body of physicians like this the question should present itself in an entirely different aspect. We should endeavor to make a man feel that, no matter what the outcome of his condition may be, he must put his shoulder to the wheel and fight and fight to the end, rather than live a living death. We should all take an active part in working out the problem of how this can be done; at any rate, we should use our personal endeavors in this matter because, after all, it depends on the individual citizen. (Applause.)

Graft in the Legal Profession.

Mr. Clarence Darrow was introduced, and spoke on this subject. He said: I know something about graft in the legal profession. I have worked at it now for a good many years, both the profession and the graft, so, of course, I know something about it. I also know something about graft in the different professions and callings in life, and in what little I have to say tonight I shall correlate the graft of the legal profession with the general graft that is everywhere present in the community. The fact is the human race is a race of graft, and it has been a race of graft ever since the original savage took a club and went out to get something away from somebody else because he happened to be stronger than the party whom

he attacked. The human race has lived and grown and evolved by grafting.

A great deal depends upon definition, and for myself I will define graft as I understand the meaning of the word. What is graft? Some people would say it is taking property contrary to the law. That is a very poor definition, as any lawyer knows, and as anybody knows who knows anything about lawyers and law, because if we only look to the graft outside of the law, we will find only a small part of it. Great grafts are done inside the law. The real wise grafter never undertakes to get something contrary to the law. He undertakes to fix the law so that he can get something according to the law. It is a great deal more profitable and is very much safer. The cheap grafter, who does not understand his business, and does things by retail instead of wholesale, and who has little voice in making or administering the law, undertakes to graft contrary to the law, but not your Morgan, your Rockefeller, your Schwab, or any men who really have a graft that is worthy of the name. They do it all inside the law. It is easier for them to choose their agents and their tools to fix the law the way they want it, and they get what they want without running the slightest possible risk.

If I were to define graft, I would define it differently. I should say, it was the effort of any human being to take from society or from another human being or animal more than he really gives to society in return. Under that definition, if any of you are not grafters you are unfortunate indeed, because the world is made up of two classes of people. One class will get a good deal more from society than they have contributed to it, and the other class is bound to contribute a good deal more to society than it gets from it, and all of us, one way or another, fall into one of these classes. Necessarily, we must fall into one of these classes.

The grafter, like everything else, is a product of his environment. Nobody knows how much there is in environment. In fact, there is not anything in a man except heredity and environment, and heredity is the environment of the ancestry. It is all environment when we come to figure it out, and graft is the outcome of environment the same as anything else, whether it is hereditary, or whether it is environment.

There is considerable grafting in the legal profession; in fact, indirectly, that is what the legal profession is for. It is a business that is chosen by certain men because they think by pursuing it they can get more than they can by pursuing any other business they are familiar with. I take it, that in the main is what the medical profession is for, although I do not deny the fact but that there are here and there physicians who have little thought about the money there is in their profession, and here and there are some lawyers, but the Lord knows they are few who do not think about the money in their profession. They are really following their calling, because they believe that in the particular calling which they choose to follow they can give more to the world than they could in any other calling. I take it, there is

no other definition that is more reasonable or logical than this: The man (lawyer or doctor) who in operating against the law takes more from society than he gives back to society is a grafter or a thief, because in a sense the words are synonymous. He may be either one against his own will. He may be either one because certain things over which he has not the slightest control have placed him where he must be the one, or else he must forfeit his life, and self-preservation is the first great law of nature.

We have a Bar Association in Chicago whose business it is to pick up small grafters in our profession, who from lack of wisdom or opportunity have made their grafts always small, contrary to the rules of the game—contrary to the law. These rules are not always wise, and let us hope they will be often changed in the years to come as they have been changed in the years that have passed. For my part, I have always considered these grafters as unworthy of notice, whether found in the legal profession or any other profession. I have always believed that if we could get rid of the big grafters, the small grafters would get rid of themselves, and these law grafters that are prosecuted by the Bar Association, for instance, are the kind of men who are unable on account of environment, experience, or intelligence, to find anything more profitable. The question is to find something more profitable for them. But there is another class that is very much more baneful to the community, who are not in any danger to themselves, but who operate entirely inside of the law.

My friend, Mr. Fisher, says there are no doctors in the City Council. Well, that is true. That speaks well for the doctor. (Laughter.) I might add, there are few doctors in the Legislature. That is true. That speaks well for the doctor. (Laughter.) There are few in Congress; there are few in the Senate; there are few in public offices of any sort, except on Boards of Health, and they are generally more politicians than doctors, and I trust none of them are present tonight. I do not wish to disparage doctors, because I met a great many of them at Springfield as a member of the Legislature. The fact is, there are more lawyers in all these places than doctors. It is not because the lawyer is a self-sacrificing man. He goes to the Council for the benefit of his country; he goes to the Legislature for the benefit of his country. Lawyers are natural politicians. These people go to these places not because they have been called by their constituents, but because they call their constituents to call them in every instance. Like everything else that goes along the line of least resistance, we find these places filled with lawyers because they are naturally suited to them.

Under my definition of graft, how many lawyers are there in the United States who follow their profession for the sake of bringing about justice on earth? Mighty few, I can tell you that. You find the ablest lawyers are always associated with the biggest fees. Wherever you go that is the case. The great corporations, the wealthy men, are always able to command the best talent in the legal profession. Why? Because they can afford to pay for it. Nothing

else. They can afford to pay for it because their particular graft is so enormously profitable; because they are receiving from society so great an amount in excess for all they have contributed to society, that they can afford to divide up with the able lawyers of the country who themselves become grafters in turn.

We have had in this country many instances of graft. For instance, the Council Committee has been investigating a few people in the City of Chicago who have taken twenty-five cents or twenty-five dollars, and we have spent time and money in investigating it. But we pay no attention to a street-car company that has property worth ten million dollars; that has issued stock for over forty million dollars; or a gas company with property worth fifteen million dollars that is stocked out and which pays dividends through the people of the City of Chicago on a hundred million dollars, with only fifteen million dollars invested. This is not graft, but business.

Not long ago the whole country was up in arms because a walking delegate in New York took a piece of graft from some construction company, and Mr. Parkes was lodged in the penitentiary, and the whole country believed that this was the most grievous offense ever committed in the history of the country. And yet Mr. Morgan had taken three hundred million dollars' worth of property not known, and had put on a mortgage of three hundred and ninety millions of dollars or more than it was worth, and then issued preferred stock for five hundred million more, and common stock for another five hundred million, and sold it to the people of the United States. And this was not graft. That is, by a simple trick and with the aid of the most astute lawyers, made possible by the law, he was able to saddle upon the people of the United States one billion dollars of stock. Nobody calls this a graft because it was so big. We have seen exactly the same thing almost in every great industrial institution in the United States, particularly in the organization of railroads. A railroad is stocked and bonded for four dollars for every one dollar that goes into it, or at least three dollars and fifty cents; yet the people of the United States, by reason of the manipulation of the men who graft, not outside but inside the law, are obliged to pay this enormous load. So in every field of activity and of life, and so far as my profession is concerned, I will say that these gentlemen are advised by lawyers. They are advised by the smartest lawyers we have in this land. They are advised by lawyers who stand well in the community, who are never prosecuted by Bar Associations, or condemned by the public press. They are shown the way by which under the forms of law they may prey upon their fellowmen.

I have not time tonight, or any other night, to consider the cause of the few insignificant lawyers who practice in the justice courts, and who now and then violate the law. These lawyers practice in the Supreme Court, and they not only advise their clients how to evade the law, but they help to frame the law. They go to Congress and to Legislative bodies, and they fix the law so that it will favor the interests

which they represent. This is a dangerous graft in the legal profession, and there are men who practice it who have no idea they are doing wrong; who believe themselves that they are pillars in society, and that they are helping to serve Republican institutions rather than destroy them. But what is the cause of it? Those men are not bad. They are creatures of environment, just the same as the small grafter. The doctor who considers the amount of money he can make in his profession, rather than the amount of human misery he can alleviate and the ills he can cure, is not a bad man. Very few of us do as well as we wish we might do. We find ourselves hedged about wherever we are with those restrictions that force upon us a line of conduct that we wish we might avoid. I take it, there are no physicians in this room who would not gladly give their services, if they could do so, instead of asking for so many dollars for rendering so many hours of service. There are very few in your profession who would not, if they could, alleviate human suffering without pay. But you cannot do it, and we as lawyers cannot do it. We are the product of evolution. The children of the original savages went out with their clubs to get what they could, and we have come along down, stumbling down, through the ages, through oppression and bloodshed, outrage and wrong, the best we could, and each of us has sought to perpetuate his own life and that of his offspring. In other words, we have been selfish, and it is almost impossible to live even in this enlightened age and generation of the world, and so when we come to look at society as it is today, it is pretty much all graft. We do not know where it begins. We do not know where it ends. Every person, great and small, is seeking to get out of society all he can, and give as little as he can in return. Of course, here and there, there are individual exceptions, but if there are exceptions, they are too wide from the rule that they will die. Any man who is simply determined to give all and take nothing cannot live very long. If he did, he would leave nobody to follow his footsteps. The whole construction of society, the whole construction of business, is along the line of everybody looking out for themselves. It is not along the line of cooperation, of mutual assistance, but along the line of the individual wanting more and more, and so long as society is so organized there will be graft; and I do not care how stringently you enforce the criminal law; I do not care how many jails you build or how vigilant the prosecutor may be, so long as society is organized upon these lines, you cannot stop graft. The only way to stop it is by opportunity. For instance, away back in olden times in England they used to transport their criminals to Australia, and when they got there, where land was plenty and opportunity great, they became respectable citizens. They did not steal sheep when they found it was easy to raise them. After a while, they became so respectable they built churches and jails of their own. There is a lesson taught in this, not by dreamers, but by practical men. For instance, fifty years ago Mr. Buckle, in his great history of civilization, covered the statistics of crime, and showed that

crime increased just as the price of bread increased, and that it decreased just as the price of bread decreased, and intelligent people, who do not believe in graft, who do not like the world of graft, who hate to do grafting themselves, must give their attention toward arranging and adjusting society, and whether that arrangement or adjustment is near or far off, whether it shall come in our day or a million years hence, every step of the human race that looks to something higher and better must be a step along the line of eliminating self-consciousness, that will prevent this eternal struggle for existence, that will turn mankind into brethren, helping each other, instead of into cannibals, preying upon each other as we have been through the ages that have passed. We cannot help it. We are the products of the past, but through all this evolution the world has been looking forward to the day when there will be no grafting; when the theory of industrial life will be cooperation instead of competition; when each individual, instead of seeking to take more from society than he gives to society, will be seeking to give more to society than he takes from society—in that day there will be no grafters in any of our professions, if indeed there will be anybody in any of our professions. (Applause.)

Medical Graft.

Harold N. Moyer spoke on this subject. He said: Notwithstanding earnest efforts I have been unable to find anyone in the medical profession who grafts. Since the topic was assigned me I have made diligent inquiry and have been unable to find a single member of the profession who says he is a grafter. I have found one or two who knew of some one who had grafted, but upon inquiry I found this was mere rumor, as the individuals charged all denied it.

A definition of graft has been given us by Mr. Darrow which implies his conception of the word, but no one has attempted to give its etymology. About twenty years ago the word *boodle* signified what is now understood by the word *graft*. At the present the term *boodle* has almost passed into disuse. The word *boodle* originated in London in the early part of the last century. A certain coffee house was kept by a Mr. Boodle, and in his place about all the crooked work of Parliament was concocted. Macaulay, in the *Georgics*, says:

"And Boodle's patriot band

Fat from the leanness of the plundered land."

The etymology of *graft* is more obscure than *boodle*. It is evident that the word implies more than *boodle* and it is, indeed, a better word. No mere robber or highwayman would be spoken of as a grafter. It implies an individual who uses a position of trust to further selfish ends. This use of the word is clearly reflected in Shakespeare's *Winter's Tale*, where he says: "A servant grafted in my serious trust and therein negligent."

As the word *graft* has triumphed over its fellows, it may be assumed that it is expressive and accurate and it can hardly be classed as a slang word. It ought to be accepted as one of the strong words of the language.

Mr. Fisher tells us that *graft* has permeated all governments from the earliest time to the

present; in this respect our times and our government are not different from those that have preceded. I once asserted that the American people were the greatest nation of grafters on the face of the earth. The gentlemen with whom I was conversing said that he did not think so. As he had a wide experience in foreign countries, I asked him what country he thought was worse, and he said that China was worse and that Bulgaria was about as bad.

Mr. Darrow says this question of graft is as broad and deep as our social fabric, and he told us that with society, as now organized, it has got to be so. If it is so and has got to be so, it is all right. I believe that society is evolutionary; that we are struggling on to something better. In the future it is going to be better than it is now. To point out the defects in the present condition of affairs is valuable, just as medical men point out organs that have lost their uses, structures that have become functionally defective, like the appendix vermiciformis. It is probable that it is a vestige of something that was once valuable in the human economy, and that now it ceases to be such except as a graft for the surgical fraternity. (Laughter.) I think we can accept Mr. Darrow's dictum in the main, just as we would accept any truthful lecture on pathology in the dead-house. It is just about as valuable as a dead-house lecture, because it is something that deals with the remains of things, and with the excrescences. We are striving toward something higher and better. Of course, we shall not arrive there at once, but we will get there, and so we can in the immortal words of Lincoln at Gettysburg, slightly paraphrased, say: "We here highly resolve, that this, a nation of grafters, for grafters, and by grafters, shall not perish from the earth." (Applause.)

As to medical graft, according to Mr. Darrow's arraignment of society in general, the medical man is a grafter because he belongs to those who get what they can and pay out just as little as they can.

The main topic to my mind—one that is fraught with some peril for the future of the profession—is in relation to medical fees. As a member of the Medico-Legal Committee of the Chicago Medical Society, I attended a malpractice suit against a physician a few days ago. In the examination of the jury two of the men were excused because they were Christian Scientists, and said they did not want to sit on a jury where a doctor was on trial. Two other men (they seemed to be intelligent and spoke English coherently) said they could not sit as jurors and give any physician a fair trial. After the jury was about to be sworn, a third man went to the Judge and said that while he had answered the questions put to him and had been accepted, he was quite sure he could not sit on the jury and give a doctor a fair trial.

There must be something seriously wrong in the attitude of the laity toward the medical profession when three men out of twelve say they can not give any physician a fair trial in a civil case, and I fear this attitude is in some way due to modern medical fees. This subject has been discussed before this club, you remember the happy expression of Dr. Zeisler and how

it touched us all, when he said that the large fee was the normal fee. It was such a nice expression and such a happy thought. Of course, a physician can fix his fee, at what he thinks is right and proper, and when a wealthy man consults one of our ophthalmologists on State street and has a cinder taken out of his eye, and is charged a thousand dollars for it, he thinks the fee is abnormal, but the ophthalmologist tells him that if the cinder was not removed promptly, he might become blind in that eye, and says, "What do you think that eye is worth to you?" Well, he thinks it is worth more than a thousand dollars to him, and so that is one of the normal fees. (Laughter.) I question the soundness of this argument. I have lately seen reports in medical journals of very large fees having been sued for in court against estate of deceased persons, individuals of large wealth. The argument that the wealthy man's life is worth more to him than the poor man cannot apply to the dead rich man. It is illogical to charge a big fee, as life has not been saved; and the fee should be low, or what we call abnormal.

The question of medical graft is closely associated with the fee. There is no doubt but that the physician should fix his fees in accordance with what he thinks is right. He has got the right to offer his services for whatever he thinks they are worth and he alone is the judge. But having once offered his services for what he thinks they are worth, there is no logic in saying that one man ought to pay more for those services than another. An interesting decision has been rendered by the Supreme Court of New Jersey in reference to this matter, among other things it says that the medical man has a right to fix a maximum fee. He can charge less if he wants to, but he must not exceed the maximum. In other words, he must exercise some sense in his charges. Over this question of fees and the relation of the medical profession to the public there has been a decided change in the last twenty years, the medical profession and their patients are getting apart; there is not that sympathy and harmony between physicians and patients that existed at one time, which is so beautifully described by the older members of our profession. When the profession is thoroughly organized, we will have to discuss the question of fees more thoroughly and exhaustively. Of course, we can rely for a few years on the beautiful words of Dr. Zeisler in reference to this matter, but they will not last very long because we are rapidly getting into deep water.

There are minor phases of graft; at least, I have heard of them. It is charged that the Cook County Hospital internes have taken money for making out insurance papers certifying to deaths in that institution. The President of the County Board has sat down on this, and it will be stopped. I suppose it amounts to about four dollars a year. (Laughter.) I also heard some years ago that there was a doctor who had obtained some antitoxin for administration to his poor patients without charge; that he had signed the usual blank statement, giving the names of patients, their places of residence, etc. This matter was looked up by the Board

of Charities, and it was found that he was getting antitoxin for nothing.

There are other phases of graft that might be considered, and one of which I have not been able to trace. You are familiar with the frequency with which we receive circulars from instrument houses, offering 25 per cent commission. We promptly consign these circulars to the waste basket; but the persistence of these instrument houses in sending out these circulars is remarkable, in face of the fact that they never have any responses. Recently I received a circular from a drug company in which they wanted physicians to prescribe certain formulae. This company wanted prescribers throughout the country to write special formulae that they would put up and for so doing they would be given fifteen or twenty per cent on all prescriptions that went out from that drug house.

To what extent there is a division of fees no one can answer. It is charged that this practice is prevalent particularly among the surgeons. I have not been able to find anybody who does it. But the thing seems to be going on. Those are some of the things that are permeating the medical profession, and I fear the profession is becoming a bit commercialized; not the profession of Chicago, not the members of this Club, but those of the outlying districts (Hear! Hear!) I find this sort of thing is putting the practice of medicine in a position that is not enviable.

Physicians are subject to environment. They try to emulate the manner of the great grafters by whom they are surrounded. If he remains in the social swim he must graft. But why keep in the social swim? Why should a physician live like a millionaire? If he tries to do it he must resort to the sordid commercialism which is called grafting. If the doctor is a true physician, he has the sentiments of humanity and morality in him, and that is the reason he does not go to the City Council and learn to graft. The physician if he turns grafter does so as a rule from force of circumstances. It is environment and an extravagant family that turns him to devious ways, and not a bad heart.

General Discussion.

J. Clarence Webster: We all know that municipal graft has existed from the earliest times, and it was well described by Mr. Fisher. Some of us are surprised to learn that there is such a thing as educational graft, but we are no wiser now than we were before, because Professor Vincent is not here to discuss that phase of the subject. We are not surprised to learn of graft in the legal profession, and we are more emphatic in our belief since Mr. Darrow has spoken.

When Dr. Moyer got up, I hoped he would turn to these gentlemen who represent the laity and say, Oh, ye corrupt citizens, learn now of a pure body of men! But he did not do it. His statements lead us to infer that there is such a thing as medical graft.

In the researches which Dr. Moyer has been making the last week, he has not found quite the correct etymology of the word graft. I am under the impression that the term is of medi-

cal origin, and for the benefit of the lay members, I should like to explain its meaning. I think it was a Swiss doctor who first began to graft. Of course, this was a legitimate procedure. This doctor cut little particles of skin from the patient's body, or from somebody else's body, and stuck them on to raw surfaces. In the course of time grafting became a well-recognized surgical procedure carried out as I have described. At the present time we have departed considerably from the original significance of the term. As it is used tonight it evidently has the general meaning of transferring something from one person to another. Medical graft is the process of removing something from the pocket of the patient by the surgeon or physician and of transferring part of it to another physician. It is this that Dr. Moyer has been describing. At the present time, I think some of us can substantiate the rumors a little more accurately and definitely than Dr. Moyer has done, and it seems to me that we have arrived at a stage in which we can say, are we to continue in practice of an honorable profession or to adopt the custom of competing traders? For many centuries our profession has subscribed to the oath of Hippocrates and has recognized as its totem the cock of Esculapius. You remember the oath of Hippocrates. From the very, very many rumors in the air, which may easily be authenticated, I think there can be little doubt that our profession has to a considerable extent departed from the old, long-observed code of this ancient sage.

Mr. Darrow has given us an interesting definition of graft, the individual taking more from society, or from some other individual, than he has contributed. This definition is well worthy of consideration. Take, for instance, its application to the question of fees. I am convinced, that those who are in the position of getting very large fees are often to blame for the present state of matters. I doubt, for example, if any surgeon is warranted in claiming a fee of a thousand dollars for the repair of a slight laceration of the perineum. I am aware of such a case, and know that it was obtained owing to the ignorance and fear of the patient. It is not surprising that the doctor who took the case to the operator demanded a commission of three hundred dollars. I believe in good fees and in large fees, but they should correspond to the gravity of the operation as well as to the size of the patient's pocket-book. I am certain that many practitioners who are struggling in the country districts, or in poor city practice often feel that the surgeon is a robber and they are tempted to deviate from the straight path, demanding some of the plunder.

Dr. Moyer has spoken of necessity as a stimulus to graft. That is undoubtedly true in some cases. Some poor fellow, with a wife and children, not knowing how he is going to pay his bills, may now and then be stimulated to take his patient to the operator or consultant who will give him a commission, in addition to what he earns by his own work. But what about the prominent Chicago operator or consultant who is not poor or struggling, and who corrupts practitioners with bribes, or who sends agents and letters throughout the country

drumming up cases for him? You know that such men exist and you can put your fingers on them. It is not necessity that impels these men to carry out their nefarious work, a practice which is not only detrimental to their own self-respect, but which is a temptation to their weaker brethren.

I have seen within the last month a circular signed by a surgeon who is connected with one of the well-known hospitals of this city. This circular has been sent around to various doctors in this State and neighboring States, offering bribes for patients sent to him. I know that the same thing has been done by a professor in one of the best medical schools in a neighboring State. These men, gentlemen, are not starving. They do not require to do that business, but yet they engage in it. What is the explanation? It must be either moral degeneration or the recognition of medicine as a trade in which one may do anything to make business. What does it matter that we have the care of human lives? Business is business. We shall use our patients so as to make the most money out of them. We shall take them to the operator who shall pay us most for the chance to operate, regardless of his fitness. A few lives may be sacrificed, but we shall have gained the commission. If we are to occupy this position, why adopt and talk about codes of ethics? Grocers don't require codes of ethics. They do their best to get ahead and in selecting methods of business need only be careful not to be caught infringing the law of the land.

Our profession must decide whether they are to be one thing or the other. At present there are a few who openly believe in graft. I was told a short time ago that a Peoria physician stated in a medical society that he believed in asking for a commission and that he did not employ a surgeon who did not give him one. I have not heard that his distinguished city cooperator has made any such frank admission. Doubtless he will hesitate to commit himself openly, since he may be one of those who denounce in public what they practice in private. It must be very unpleasant to lead such a double existence for it is generally understood that there is an added unhappiness in knowing that one's life is at the mercy of the seeker of commissions, and that the latter often makes bold to demand not ten, but twenty, fifty and even seventy-five per cent for the job.

Palmer Findley: I am convinced that the burden of the graft problem falls upon the young surgeon. The older surgeons who came into the field and were well established before the medical profession began to graft are now able to get along in spite of it, though doubtless with no little embarrassment.

But the young surgeon who is at the beginning of his professional career will learn at the very outset that this question is possibly the most serious one with which he has to deal.

He must take a firm stand against it or he must fall in line with the present trend of the profession in dividing the fee. It becomes a moral issue with him, and if he decides to keep himself free of all such entanglements, he must know that his progress will be slow. Others of less merit who resort to graft to further their

personal interests will outstrip him, at least in the early years of his practice.

He may be said to be between the two horns of a damnable dilemma. On the one hand are eminent surgeons of large experience who do not graft for financial reasons and who would not graft for moral reasons. On the other hand are surgeons of possibly equal experience and reputation who do not graft because of necessity, but who do graft persistently for reasons best known to themselves. Then there are the surgeons of lesser fame but with no less ambitions; these are not confined to our large cities, but are to be found in every section of the country, who feel compelled to divide fees in order to retain their local patronage, which might otherwise go to the large medical centers.

I do not object to the division of the fee because it makes the operator's fee less—for in fact it seldom does—but I do most emphatically object to the practice because it makes the patient's fee larger, and more than this, the patient is not always given the benefit of his attending physician's best judgment in the selection of the surgeon. The surgeon with whom such a deal can be made is the one chosen to do the work, and too often he is by no means the best qualified man available.

I believe "the laborer is worthy of his hire," and every man should have his just reward. But there are ways of accomplishing this that are fair to all concerned.

As a remedy for the graft malady I would recommend what President Roosevelt suggested for the control of the trusts—Publicity. This is an evil almost confined to the western states. It is little known in the east, and is altogether unknown to other countries. It, therefore, becomes the duty of the profession, and especially of the organized medical societies of Chicago, to take the initiative in the crusade against this vice. And let them first cast the beam out of their own eyes; then shall they see clearly to pull out the mote from their brother's eye. It ought not to be possible for a surgeon who resorts to such practices to hold high place in our reputable medical schools and medical societies.

Mr. William H. McSurely: When Dr. Moyer was talking about a doctor's bill being so large and his patient was dead, it occurred to me that it does not seem logical to make such a large charge, because if the patient dies, it would seem the services which the physician had rendered had lost much of their value. I have heard of a case of that sort which was before a member of our (the legal) profession. I will not deny that it was Brother Darrow, and he maintained the correctness of the large bill on the very ground that the patient was rich, and a grafter; that the physician had earned his fee, and that it should be paid in the nature of a reward for services rendered.

In spite of the definitions of graft that have been given tonight, I will venture another in a pleasant sense. A grafter is one who allies or attaches himself to some outside interest, some interest apart from the main motive of his life, for the purpose of getting from that outside interest something that will be beneficial to the main motive of his life. That definition is a little rough; I have not had time to polish it.

If I had, it would be a stunner. (Laughter.) For instance, here is a lawyer. I see him in church. He teaches Sunday-School; he goes to prayer-meetings, and I say to someone, Who is that? And he says, "That is So-and-So, the young lawyer." If I am wise, I will ask what is his graft? And the answer naturally will be church work. I see a physician who goes to all parties. He subscribes so much for a box at the Auditorium. I see him at every variety of entertainment. Someone asks, What is his graft? Society, of course. What is my friend Fisher's graft? Municipal reform. I have known my friend Darrow for some fifteen years, and if any man should ask me what his graft is, I should say, the laboring man. I say this in the most kindly way. (Laughter.) I think the man who isolates himself from society will remain isolated all his life. Most of us are not that kind of men. (Applause.)

G. Frank Lydston: I was very much interested in the remarks of Mr. Fisher regarding the doctor in politics. I was wondering, as he was speaking, how sincere he was. I suspect if he had told us the truth, his sentiments would have been in line with those of Mr. Darrow. Mr. Darrow expressed his opinion of the doctor in politics when he criticised doctors on Boards of Health, of which more hereafter. If Mr. Fisher is sincere, I presume if he were seriously ill, and had two doctors to select from—one active in political affairs, a man of public spirit, and the other who stayed in his office and attended strictly to business, of the two he would select the politician for his physician. The lawyer, it seems to me, who criticises the medical profession for not taking an interest in politics and public affairs, does so with bad grace. It is a graft for the lawyer, but a grave for the doctor. The doctor who devotes a portion of the years of his life to politics and to the public service is forever damned not only in the eyes of the public, but in the eyes of members of the medical profession, in case he happens to do anything which savors of political graft. The reverse is true of the lawyer. In politics the lawyer attracts attention to himself. It is about the only way some lawyers could attract attention to themselves. He is elected judge by hook or crook—by ignorance of the people, or multiplicity of votes. After he has presided on the bench for a few months or years with that fairness which characterizes the lawyer on the bench, he retires or is retired, and becomes a great corporation lawyer. Only a little while ago one of our judges had the opportunity of refusing a beautiful bunch of graft of this kind. They rarely refuse. The politicians who control public affairs do not want the doctor because the doctor has no pull. I think the situation was described aptly by a distinguished West side member of the Legislature—one "Bull" Burke by name. I had a chance in a conversation with him at Springfield on one occasion to bring up a certain medical measure in which numerous prominent men were interested, and we were anxious to get it through the Legislature. But he said, "You fellows make me tired; you don't know how to 'kiss' bills through the Legislature." You can draw your own inference from that. It is

evident that members of the medical profession are not experts in "kissing" things through the Legislature; hence our lack of political prestige.

As I take it, Mr. Darrow's definition of graft is simply emoluments of various kinds, money, goods, lands, or what-not, acquired without giving the quid pro quo, which, if I am correct in my assumption, means that nature inclines very kindly to graft.

Grafting is as old as civilization. Wherever the banner of civilization has been carried—wherever man has carried the banner of civilization in his hat, with a Bible in one hand, and a grab game in the other, graft has been at the bottom of it. It is the fundamental principal of human nature.

Mr. Darrow has passed a severe and unjust criticism on the health officers, I presume, of Chicago. I wonder if he knows anything about the record of the City Health Department of Chicago, and whether he read the newspaper attacks that were made upon Dr. Reynolds. I wonder if he knows that Dr. Reynolds is a representative physician, and that whenever a change has been contemplated in the office of Commissioner of Health, an appeal came direct from the medical profession to have Dr. Reynolds represent us. I wonder if Mr. Darrow knows that at the Buffalo Exposition our City Health Department made the best scientific exhibit of any city. Largely through the efforts of the members of our City Board of Health, Chicago is the most healthful city of its size in the world. I wonder if Mr. Darrow appreciates the fact that the President of the State Board of Health is a distinguished Chicago physician, a professor in a medical school, who serves on the State Board of Health without salary. I do not recall any lawyer in a position of equal public importance who serves without salary. I will submit this proposition for Mr. Darrow's courteous consideration, in all good faith, that the professional men who give their services to the public for nothing, and who are not working in their own interests, are not lawyers, but physicians. What about the personnel of the lawyers in the public service as compared with that of physicians in public service? Take, for instance, the Chief of the Marine Hospital Service of this country: there is not a lawyer who does for the public one-tenth of what that man does every year. I am willing to stand by that assertion. I have no doubt Mr. Darrow will convince me that I am wrong, because I am easily convinced. The fact is, America is not only a land where King Graft reigns supreme, but it is a land in which the public likes to be grafted.

Dr. Webster has offered some severe criticisms on the subject of fees or medical grafting. I was wondering while he was speaking, what induced him to leave his position in Canada in a University there, where he made for himself a widespread reputation, had won fame through his scientific labors, and had received every encouragement, to come to this wild and woolly Western town. He may answer that question if he likes; I still have my own opinion. He is going to do his grafting here.

As to his remarks anent the division of fees, the members of the club know my position. I believe the laborer is worthy of his hire. When two men are associated in a case and divide the responsibility and work, each should receive a pro rata. I do not believe, however, that when a man has a case that he cannot handle and brings it to me or to any of you to be operated on, he is entitled to put himself on a parity with myself. If he were, he never would have brought the case to me. I was telling a gentleman at the table an experience I had with reference to a free grafting proposition. A physician asked me to do an operation upon him, which I did, and incidentally I learned that he had two objects in view when he came to this city. One was 'to have me operate on him for nothing, as he had some confidence in me. He also took a somewhat similar case for operation to another surgeon who, I am told, received five hundred dollars, and who divided the fee with him. He asked me what he could do for me, and I told him the next time he received a fat fee he might turn it my way, and that would even things up. (Laughter.)

Dr. Moyer was unusually modest in his remarks. While he had a good deal to say about the medical grafter and large fees, he did not throw very much light on the subject. I really came here tonight to hear something about that heathen Chinnee, "for ways that are dark and tricks that are vain,"—the professional expert, as I think he knows something about him. There is a large element of unfairness which suggests itself to me with reference to surgical fees, which was not considered. I was very much surprised at some of the expressions that were brought out this evening by medical men. For instance, a thousand dollars for a perineorrhaphy, a comparatively simple operation. It would be difficult to convince the husband of the patient, or the father or mother of the patient, or the patient herself, that she was a simple matter for consideration. The proof of the pudding is this: Let such a case go wrong, and that same patient, who objects to paying a thousand dollar fee (and it is excessive) would not hesitate to sue the surgeon for ten thousand dollars, and it might cost him two or three thousand dollars for his defense, even if no judgment is gotten against him.

Mr. Clarence Darrow: I am afraid that my remarks have been slightly misinterpreted. I was a little uncertain regarding one or two statements I made, but after what has been said I am left with the only alternative to tell the truth, and so I will say, that it is even possible that the President of the State Board of Health, who is a worthy gentleman and able physician, does not know the truth in reference to some of these matters.

First, let me say a word or two in reference to the remarks of Dr. Lydston. Dr. Reynolds has been a good friend of mine for years. I have the greatest confidence in him, and when he was under fire some time ago he came to me and asked me to defend him, a thing I could not do because of other work I had on hand. I have great respect for him, and when I made my remarks I was not thinking of him. If I

had known the newspapers were attacking him. I would have assumed at once that he was an innocent man. They never influence me except the other way. (Laughter). What was in my mind were two facts, and I will give them to you because they may be interesting to the medical profession.

When I was a member of the last Legislature, we had before us bills to regulate more stringently the practice of medicine. I do not need to discuss the origin of those bills. On the whole, I was rather in favor of these bills, because so many of my good friends in the medical profession wanted them, and I did not see anything very wrong about that particular bill last winter. But here is something you can look up and verify if you desire. We had before the Committee the Secretary of the State Board of Health, whose name I do not need to mention. We had other members of the State Board before the committee, and we were assured that the Board did not want this new medical bill passed, although they did not say so to the committee. But there were a number on that Board, officials and otherwise, who were making their living out of it, and who did not want the new law passed, which created another Board, and which would put them, to a certain extent, out of business. If you investigate this matter, gentlemen, right down to the bottom, you will find it is absolutely true. I do not say every member of that Board, but members who came before us, and notably officials, and the attorney of the Board was a member of the committee, and the reason the bill did not pass is because the State Board of Health did not want it to go through. I am not guessing at this.

Another illustration came to me personally last week, and I had these two things in my mind when I spoke of physicians posing for public offices, which I do not believe in any more than the last gentleman who spoke. A man by the name of Fuchs, who takes X-Ray pictures or skiagraphs, who is among the best X-Ray men in the city of Chicago, and who is patronized by a large number of the best surgeons in the city of Chicago, brought to my office the other day a letter which was addressed to him by one of the officials of the State Board saying he was going to be prosecuted for taking these pictures or skiagraphs because the law did not allow anybody but a licensed physician to take these skiagraphs. A number of surgeons in Chicago had spoken to me about this, because they are very much interested, and have asked me to do what I could in the man's defense. Of course I told them I would. But it appeared to me then, as it appears to me now, that this is purely a case where political doctors, not the best doctors in Chicago, who are put in office and are making money out of the office attacking this man as they attack dozens of others in your profession, for the graft that there is in it. These were the only two matters I had in mind.

George W. Webster: As President of the State Board of Health, I went to Springfield and appeared before the Judiciary Committee of the House at the last General Assembly, of which

Mr. Clarence Darrow was a member. I had previously written Mr. Darrow and every member of that Committee in regard to the bill which was then pending before the Committee. I said in the most emphatic words I could command, I am in favor of this bill. That was the concluding sentence in my letter. I reiterated it throughout that letter. If Mr. Clarence Darrow will produce that letter, he will see that I told the truth. I can produce a copy of it, which will show that I was in favor of that bill. The records will show, aside from Dr. Evans, that I was the only member of the regular profession of the City of Chicago to go to Springfield and appear before the Judiciary Committee and plead for the passage of the bill. Furthermore, I had with me every member of the State Board of Health at my back, every one of whom said he was in favor of the bill. Now, I say, gentlemen, Mr. Darrow or anybody else, who says that I was not from first to last in favor of the medical practice bill (Senate Bill 370) says what is absolutely and unqualifiedly false. That is the position I took in this matter.

The Chairman (Hugh T. Patrick): Mr. Darrow wishes me to say that he did not have Dr. Webster in mind, but someone else on the State Board of Health.

Dr. Webster: I want to make my position clear as false statements have been made in regard to my position in this matter, and there are men in this room who will bear me out in what I have said. I will simply say again, that every member of the Board was in favor of the passage of that bill. I will say, furthermore, that Dr. Egan has said, as Secretary of the State Board of Health, that he has been first to last in favor of that bill. He was one of the first men in the State of Illinois to propose a medical examiner's bill, which he did five or six years ago. He has constantly favored such a bill from that time until the present. I will say, that it would not make any particular difference in Dr. Egan's salary, because this would be the creation of an entirely different Board, and Dr. Egan would continue as Secretary of the present Board with a salary practically the same as at present. Therefore, the statement made that the State Board of Health was opposed to this bill was not true. As I have said, I appeared before this Committee (of which Mr. Darrow was a member), which had the bill in charge. The bill never got out of the pockets of the Committee. I do not know why. I was told that we were not good enough grafters; that we ought to grease the Committee.

Mr. Darrow: Isn't Mr. Smeijkal, who was a member of the Judiciary Committee of the House, the Attorney for the State Board?

Dr. Webster: No, sir. Smeijkal has nothing to do with the Board. He is not attorney for the Board, and has not been for a long time.

Mr. Darrow: When the Legislature met he informed us he was.

Dr. Webster: He was formerly attorney for the Board, but was not at the time of meeting of the General Assembly. The Attorney for the Board was not in Springfield on the day in

question, and did not appear before the Judiciary Committee of the House.

As all of you know, neither the President nor any of the members of the Board, except the Secretary, have ever been paid a salary, so that the statement that we opposed it, because it would reduce our salaries, is equally false and absurd. I have served on this Board for years and in as faithful a manner as I know how, and have never received a cent of salary.

NORTHWEST BRANCH.

Is Radio-Therapy of Any Value in Pulmonary Tuberculosis.

By Karl F. M. Sandberg, Chicago: Very soon after the publication of Professor Roentgen's discovery, the medical profession began to use the X-rays both for diagnostic and for therapeutical purposes, and it did not take a long time before articles on sciagraphy and on X-ray therapeutics appeared in the medical journals in the different countries.

Eight years have now elapsed since the discovery of the X-rays, and during this time the usefulness of the agent in medicine has become an established fact, and its field is so large that the X-ray specialist now is a necessity.

The different civilized countries have already their Roentgen ray or X-ray societies, with their special journals and meetings, that only devote themselves to the X-ray work.

Previous to the therapeutical use of the X-rays, experiments were made with bacteria to find out how the rays acted on them. Many different kinds of bacteria in cultures were already, early in 1896, exposed to the rays by different scientists. The result of these experiments seems to have been that the X-rays do not influence bacteria in cultures.

The next step was to inoculate guinea pigs or rabbits with different bacteria, expose them to the ray, and observe the effects; and the reports of these experiments are more favorable. In the middle of 1896, Professor L. Lorbet et Genoud, in France, published an article on "Tuberculose Experimentale Attenuée par la Radiation Roentgen," in which they report that guinea pigs inoculated with tuberculosis when exposed to the X-rays recover or live longer than guinea pigs that have not been exposed.

These and other similar experiments gave start to an extended trial of the rays in different tubercular lesions. Tuberculous skin diseases, as lupus and scrofuloderma; tuberculosis of the lymph glands; tuberculous joint affections, and even tuberculosis of the peritoneum and of the lungs were subjected to the action of the rays. From all countries the reports, as regards the effectiveness of the X-ray treatment of tuberculous skin diseases, are unanimously favorable, and the rays are now considered as good as the Finsen light, or even better.

Favorable reports of treatment of tuberculous glands and tubercular joint affections are also to be found, and some cases of tuberculous peritonitis have been treated with the X-ray with striking effect.

The effect of the rays seems most doubtful in pulmonary tuberculosis, and the opinion amongst the X-ray workers is much divided.

Owing to the importance of this disease, it will therefore be of interest to consider the literature on this subject in the different countries.

The first record of the X-rays used in the treatment of pulmonary tuberculosis that we have been able to find in French literature is an article in "Le Bulletin Medical," Jan. 17, 1897, page 45, by Mm. Rendu et Du Castel, with the title: "Sur un Cas d'Application des Rayons Roentgen au Traitement des Phlegmasies Aigues de l'Appareil Thoracique."

The authors give a detailed and very interesting report of a case of pulmonary inflammation in a twenty years old man. (Case tabulated below.)

The next record of X-ray treatment of pulmonary tuberculosis is in "Paris Bulletin de l'Academie de Medicine," 38, 1897, page 66.

M. Bergonie et M. Ch. Mongeur, read at the "Seance du 13 Juillet," a paper with the following title: "Les Rayons Roentgen ont-ils une Action sur la Tuberculose Pulmonaire de l'Homme?"

It is a report of five cases of pulmonary tuberculosis treated by the X-Rays. (Cases tabulated below.)

The following technique was used: (Page 66.) The patient was lying in a bed, the tube placed over the sick parts, the distance from the target to the skin, 20 cm. The time of exposure, ten minutes, and treatment was given three times a week. A Rubinkorffs coil, of 35 c. m. spark length, with Gaiffe interruptor (trembleur rotatif de Gaiffe) was used. A Muret tube was used, and the radiations were of such a strength that they gave a good radiograph of the hand after ten to twelve minutes exposure.

In regard to conclusions, the authors remark as follows:

"The impartial examination of these five observations allows us to draw the following conclusions:

"1. In two cases of acute phthisis in patients in whom the organic degeneration was increased by alcoholism and privations, the action of the X-ray has been absolutely none either upon the local or upon the general condition.

"2. Three cases of chronic pulmonary tuberculosis have given us the following results:

"Observation 3. No result.

"Observation 4. Immediate improvement of the general condition. Return of strength and appetite. No change in the local condition.

"Observation 5. Improvement of the local and general condition in one month and a half. Afterwards an exacerbation of the disease, caused probably by grave dyspeptic troubles.

"3. In the three cases in which the X-ray have had no favorable action, the pulmonary tuberculosis has followed its course without any new exacerbation of the disease that can be believed to be due to the treatment. We have in no case observed the least accident, not even a superficial one.

"4. The bacillus of Koch has not appeared changed, neither as regards number nor the form under the action of the rays.

"These facts, few as they are, Do they encourage to continue?

"We are not afraid to give an affirmative answer under certain reservations. The X-rays

probably do not really possess any specific action upon the tubercle bacillus, to judge from all the recent investigations. Furthermore, the examination of the sputum of our patients has uniformly shown that the morphology of the bacillus of Koch has not been changed by their action.

"If, then, the improvement achieved in two of our patients probably is due to the X-rays, we must admit that it is due to the action of the rays, not upon the bacillus of Koch, but upon the lung. These rays are capable of modifying the state of nourishment of the anatomical elements. Concerning the skin, no doubt is possible any more, and we cannot understand why they should not have effect upon the lungs as they do upon the skin.

"Finally, we must admit that under the influence of these rays there is established a better organization of the lung parenchyma for the fight against the Koch's bacillus, perhaps a more intense phagocytic action."

In "Revue Internationale d'Electrotherapie," 7, 1896-97, page 353, we find the next article on this subject, written by Mm. Chanteloup, Descompe et Roullies, under the title: "De l'Action des Rayons Roentgen sur les Poumons Atteints de Tuberculose Aigue."

This is a report of a case of acute pulmonary tuberculosis treated successfully by the X-rays. (Case tabulated below.)

The authors conclude that "It would be too hasty, in the face of such an evolution, to predict the final result, but they dare to state that lungs attacked by acute inflammation of tubercular nature have been advantageously modified, perhaps healed, in thirty sittings of radiation—9 from the front, and 21 from the back."

In "La Semaine Medicale," 1898, page 349, we find a report of the transaction on "Congres pour l'Etude de la Tuberculose chez l'Homme et Chez les Animaux." On this Congres, Mm. Bergonie et Teissier read a paper entitled: "Action des Rayons-X sur la Tuberculose."

Concerning the pulmonary tuberculosis, they state as follows: "The tubercular lung lesions are not benefited by the radiotherapy, as is seen from the analysis of the observations of M. Revillet, of Mm. Chanteloup, Descomps et Roullies, of M. Ausset, of Mm. Bergonie et Mongeur, and of M. Teissier. There has in reality only exceptionally been noted change in the local conditions, and these have been temporary and have not prevented the fatal end of the disease, the prolongation of life not being very perceptible. In a few patients there has been produced an improvement of the general condition, a diminution of the fever; however, these favorable signs have not persisted. On the contrary, in M. Revillet's case, as well as in one observation of M. Teissier, acute attacks of pneumonia have, in a suspicious way, coincided with the application of the radiotherapy. The same is the case with some grave dyspeptic troubles that developed suddenly in a patient of Mm. Bergonie et Mongeur.

"A careful examination of the clinical facts leads, then, to the conclusion, which our experimental investigation permitted us to foresee,

namely, that the influence of the X-rays in pulmonary tuberculosis is absolutely none."

At the same meeting, M. Dubard (de Dijon) read a paper in which he states that, "From a clinical standpoint, they have not ascertained any improvement of the tubercular lung lesions in 7 patients, treated daily by thirty minutes' exposure to the X-rays."

Since this congress, in 1898, we have not been able to find any expression bearing upon this question in the French literature at our disposal.

In the French literature, then, we find comparatively little upon this, as it would seem, very important question; but if we review the German literature we shall find still less.

In the five volumes of the German journal, "Fortschritte aus dem Gebiete der Roentgenstrahlen," that have been edited from 1897 until 1902, we have not been able to find any original article on this subject. We only find short reviews of the already related French work in this field, and in the first volume of said journal we find mentioned a book of Dr. Sinapius, with the title: "Die Heilung der Tuberkulose durch Roentgenbehandlung." This book is very severely criticized and is considered of no scientific value.

In the "Bericht uber die Roentgenvortrage und die Roentgenausstellung aus der Versammlung Deutscher Naturforscher und Aerzte in Hamburg, 22-29, Septbr., 1901," (Vol. V, page 28, etc., F. a. d. g. d. R.), the treatment of pulmonary tuberculosis by the X-rays is not mentioned.

In another German journal, Zeitschrift fur Elektrotherapie und Physikalische Heil methoden, there is, in II Volume, 1900, page 97, a report of "Le Premier Congres International d'Electrologie et de Radiologie Medicales," opened in Paris, July 27, 1900; and in IV Volume, 1902, page 271, "Bericht uber den II Internationalen Kongress fur Elektrotherapie und Medizinische Radiologie," Bern, 1-6, Septbr., 1902.

In neither of the reports of these meetings is treatment of pulmonary tuberculosis mentioned.

In Volume IV there is also an article of Prof. Schiff: "Bemerkungen uber den Stand der Radiotherapie im Jahre 1901," page 85. In this article he does not mention treatment of pulmonary tuberculosis by the X-rays.

In the V Volume, 1903, page 105, of the same journal, there is an article of Dr. Gordon G. Burdick (Chicago): "Radiotherapie bei Tuberkulose." (Dr. Burdick's view will be related later on.)

The English literature on this subject has not been available to us.

From the foregoing it will be seen that the French and German view on the usefulness of the X-rays in the treatment of pulmonary tuberculosis is very pessimistic. On this side of the Atlantic a more optimistic opinion seems to be reigning.

The first case of pulmonary tuberculosis treated by the X-rays to be found in American medical literature, as far as we know, is a case that Dr. Finley Ellingwood reports in "The Chicago Medical Times," 1896, Vol. XXIX, page 247, under the heading: "Tuberculosis Treated by the X-ray."

The same case was reported again the next year (1897) in "The Clinique," Vol. 18, page 360, by Dr. J. E. Gilman, under the title: "The Roentgen Ray in its Therapeutical Application." And in "The American X-Ray Journal," for 1902, Vol. 10, page 1020, Dr. H. P. Pratt again mentions this case in an article: "The Value of the X-Ray as a Therapeutic Agent."

It is the record of an Italian boy, A. G., who seemed to be very favorably influenced by the X-rays. Tubercule bacilli were found. He died July 9, 1900, from blood poisoning. Autopsy was not allowed. (Case tabulated below.)

Dr. H. P. Pratt has written several articles, in which he mentions treatment of pulmonary tuberculosis, and he seems firmly convinced of their usefulness.

In a paper read before the Chicago Electro-Medical Society, on March 30, 1903, (See the American X-Ray Journal, Vol. 12, 1903, page 115), with the title: "Experiments in X-Ray Therapy in 1896," he reports 11 cases of pulmonary tuberculosis treated by the X-rays. (Cases tabulated below.)

In a paper, "The Electrochemic Action of the X-Rays in Tuberculosis," read before the Roentgen Society of the United States, at its first annual meeting in New York, Dec. 13 and 14, 1900, (See the Am. X-Ray Journal, Vol. 7, 1900, p. 812), Dr. Rudis-Jicinsky states that he has treated 20 cases of pulmonary tuberculosis with the X-ray. Without giving any detailed description of each patient, he gives the following general remarks:

"From 20 selected cases in one year, one died with tubercular intestinal complication; another committed suicide after two sittings, and the rest are doing comparatively well, only four being complete failures.

"The majority of our patients improved; the bacilli disappeared from their sputum, the night sweats ceased, and now the patients do not cough, and say that they feel good and are restored to usefulness. But I would not like to state that the cases were cured by the X-ray exposures only, for it may have been spontaneous cure in all of them, but they are certainly now well, and are feeling good, and also just as certainly had tuberculosis when our treatment began.

"The employment of the X-ray in cases of phthisis (pulmonary) is worthy of extended trial."

Dr. Kassabian, at the same meeting, remarked (See Am. X-Ray Jour., Vol. 8, 1901, p. 831) that he had had many tubercular cases. The case can be diagnosed, but whether it can be cured or not with the X-ray we do not know.

At the third annual meeting of the American Roentgen Ray Society in Chicago, Dec. 11, 1902, Dr. Gordon G. Burdick read a paper on: "Radiotherapy in Pulmonary Tuberculosis." (See Am. X-Ray Jour., Vol. 11, 1902, p. 1261.)

In the following discussion, Dr. J. Rudis-Jicinsky, Dr. Russell H. Boggs, Dr. Gibson, Dr. Kraus, Dr. Phillips, all had seen good results of treating tuberculosis (pulmonary) by the X-ray.

At the thirteenth meeting of the American Electro-Therapeutic Association, Septbr. 22-24,

1903, (See Am. X-Ray Jour., Vol. XIII, Sept., 1903), Dr. Russell Herbert Boggs read a paper on "X-Ray and Light in the Treatment of Tuberculosis." He firmly believed "that these therapeutic agents were of very great value as an aid in the treatment of tuberculosis, no matter where situated."

In the American Electro-Therapeutic and X-Ray Era," (Vol. 1, No. 2, page 3,) Dr. Gordon G. Burdick has an article on "Radiotherapy in Tuberculosis." He reports 2 cases of pulmonary tuberculosis that got well. (Cases tabulated below.)

At a meeting of the Chicago Electro-Medical Society, Feb. 25, 1902, he read a paper: "Can Consumption be Cured by Means of the X-Ray?" (See Am. Electro-Therap. and X-Ray Era, Vol. 11, March, 1902.) In this he gives the following statements:

"In cases of simple tubercular infection among people with great recuperative powers there is no question in regard to the great value of the X-ray. It has been thoroughly demonstrated that the ray arrests the tubercular process, and if the body possesses sufficient vitality, a prompt recovery occurs after its use, without any other treatment. In people of low vitality, other means must be used in addition to the ray, if a permanent result is to be obtained.

"Take a patient who, under the best medical treatment could not recover, and he will slowly recover under the ray, while in incipient tuberculosis recovery is rapid and prompt.

"I reported in the Am. Elec. Therap. and X-Ray Era during July, 1901, thirteen cases of pulmonary tuberculosis, and five cases of joint tuberculosis, in which at least six months of time have elapsed since the treatment was discontinued. I can report sixteen cases in addition that have been treated since the report was made."

One of the best and most convincing articles in American literature on this subject is one by Drs. Boido and Boido, Tuscon, Ariz., in which they report fourteen cases treated by the X-ray, under the heading: "X-Ray Treatment for Tuberculosis." (See Am. Electro-Therapeutic and X-Ray Era, Vol. III, Feb., 1903, p. 76.)

They state: "It is a fact, based on extensive statistics, compiled chiefly in this town and the surrounding country during several years' practice, that the Mexicans are becoming more affected with tuberculosis than in former years. Besides, when a Mexican youth, ranging between sixteen and twenty-five years of age, contracts the disease, he seldom lives over one year after the first symptoms appear, and many die within the first five months of their trouble.

"The fourteen cases we report in this paper are all Mexicans afflicted with pulmonary tuberculosis in different stages of the disease, as proved by microscopical examination of the sputum, and the injection of their sputum into the peritoneal cavity of guinea pigs, which died in less than six weeks, of tuberculosis.

"The technique employed in the treatment of these is a 16-plate static machine, using a medium hard, 30-35 German tube, with the idea of producing a dermatitis as soon as pos-

sible, in each case, and then resting for a few days until the latter got well, and then beginning over again.

"In treating these cases the tube was held three and four inches from the chest, anteriorly and posteriorly, employing five minutes for each side."

After these remarks follow short records of all the fourteen cases. (Cases tabulated below), and at last they close their article with the following conclusions:

"The report of these fourteen cases shows that there have been three deaths in two years, and the remaining eleven are still living. Although two years is hardly time enough to predict any definite results, still the following conclusions can be drawn:

"1. X-ray treatment prolongs the life of the Mexicans afflicted with incipient tuberculosis.

"2. Only incipient cases appear to be benefited by the X-rays.

"3. Former experience has demonstrated to us that this class of cases never get well, and, in fact, succumb quicker to the ravages of the disease than the Eastern people, who come here for lung trouble. The majority of the Mexicans die within one year of their first infection.

"4. X-rays in this climate have apparently cured eleven out of fourteen cases of tuberculosis."

In "Denver Medical Times," Feb., 1903, p. 380, Dr. G. H. Shover has an article, "Resume of X-Ray Therapeutics," in which he says, (page 384): "Soiland, of California, speaks of the beneficial effect of the X-ray on cases of tuberculosis of the lungs. A little while ago there were being treated at the Royal Infirmary, Edinburgh, five cases of pulmonary tuberculosis, and four of laryngeal tuberculosis. Of the pulmonary cases, one has been cured, two were improving at the time of the report, one was not changed, and one, which was an advanced case, was growing worse. Of the laryngeal cases, one was cured, another had recovered his voice and was improving, and the other two had not been changed at the time of the report."

In "The Medical News," Vol. 82, p. 145, Jan. 24, 1903, Dr. S. B. Childs has an article: "Cases Illustrating the Therapeutic Uses of the Roentgen Rays." Amongst these he also reports a case of pulmonary tuberculosis. (Case tabulated below.) He ends this report by saying: "Realizing that it is impossible to draw conclusions of value from one case of pulmonary tuberculosis, I submit it for what it is worth."

In vol. 83 (Oct. 3, 1903) of the same journal, Dr. Francis H. Williams writes about: "The Use of the X-Rays in the Treatment of Diseases of the Skin, Certain Forms of Cancer, of the Glandular System, and of Other Diseases, and as a Means of Relieving Pain."

In regard to pulmonary tuberculosis, he says in this article: "The treatment of tuberculosis of the lung by the X-rays is still in the experimental stage; good results having been reported as following their use by several observers, but from my own experience I am not as yet ready to offer an opinion."

In "The Roentgen Ray in Therapeutics and Diagnosis," 1903, Dr. W. A. Pusey briefly reports some of the attempts made to treat pulmonary tuberculosis by X-ray, (See page 397-98), and then remarks as follows: "There is perhaps some ground for hoping for benefit from the use of X-rays as an auxiliary to other treatment in pulmonary and abdominal tuberculosis. It is not beyond reason that throwing X-rays day after day through the thorax or the abdomen might be of service in the treatment of tuberculosis of these parts. And since the treatment can be carried out without danger or inconvenience to the patient, and without interfering with approved methods of treatment, it would seem that the method is worthy of trial. It certainly does not hold out sufficient hopes of relief to warrant its use at the expense of residence in a bad climate, or abandonment of better-trying measures. There is, in my opinion, no ground for believing that it is likely to increase the virulence of the process."

In the Tabitha Hospital X-Ray Laboratory, 8 cases of pulmonary tuberculosis have been treated by X-Rays (cases tabulated below.) The number of treatments were in all cases comparatively few. Of these eight cases, two remained unimproved; they were both very low. The one had only five treatments; in the other the progress of the disease was possibly somewhat retarded. Four were improved, one only slightly and mostly subjectively; the other three more pronounced, with increase in weight, etc. They all discontinued treatment earlier than advised for financial or other reasons. Two made perfect recoveries; they were both diagnosed as incipient pulmonary tuberculosis, with pleuritic exudate; the tubercle bacilli were, however, not found in any of these. From our perusal of the literature, and from our own limited experience, we have reached the following conclusions:

1. No ill results, that clearly can be traced to the effects of the X-rays, have been observed, X-ray burns excepted.

2. Beneficial results have apparently been obtained in a considerable number of cases.

3. The fact that many cases, especially in the latter stages of the disease, have not shown any improvement, not even retardation of the disease, does not detract from the merits of the remedy any more than it detracts from the merits of all remedies previously used.

4. The X-ray treatment should be valued as one of our most efficient remedies in tuberculosis of the lungs, but should not exclude the use of other remedies.

5. The greater uncertainty of the effect of the X-rays on tuberculosis of the lungs, as compared with the effect on tuberculosis of skin, glands, peritoneum and joints, can easily be explained by the obstruction placed in the way of the rays by the ribs, an explanation that carries with it a suggestion, namely, resection of the obstructing ribs in appropriate cases before the use of the rays.

6. It would seem that an instrument of medium intensity and medium length exposures carried on for a considerable length of time—months—have given the best results.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—MM. Rendu et Du Castel. 2—M. X. 3—Male. 4—20 years. 5—Eight weeks. 6—Yes. 7—After eight exposures, he developed an erythema of the skin. 8—Recovered.	Disease began suddenly, May 16, 1896, with chill, fever and symptoms of acute inflammation upper part right lung. No crisis occurring in due time an exploratory puncture was made on May 28th, and cultures on agar agar showed growth of staphylococcus alb. and aur. May 30th, physical symptoms were: Absolute dullness in right reg. infrapinnata extending to reg. axillaris; dullness (not absolute) in inferior third right lung. On auscultation, bronchial respiration in two different places, in reg. infrapinnata and farther down. Over rest of lung different kinds of rales. June 25-28, patient expectorated for first time thick purulent sputum, that on two examinations showed the condition unchanged until July 13, when treatments began.	Antipyretics, baths, etc., for first eight weeks. Then X-ray treatment. Rays were applied ten days, 55 minutes every day. First treatment was given on July 13, 1896.	A very large Ruhmkorff's coil, furnished with electricity from powerful accumulator. The tube was in 10 to 15 c.m. from chest.	After three exposures condition of patient changed, fever decreased, accompanied by profuse diaphoresis and rapid improvement began. Aug. 1, patient was able to move out in the country. By Oct. 1, had gained thirty pounds in weight. Oct. 4, physical examination: Still slight dullness in right reg. infraspinn., with attenuation of the vesicular murmur. No bronchial respiration. Rales entirely disappeared, except in right reg. infraspinn., where they can be heard on inspiration after coughing.
1—M. Bergonie et M. Ch. Mongeur. 2—Male. 3—31 years. 4—Four months. 5—Yes. 6—No. 7—No. 8—Died.	Alcoholic. Acquired the. Sick since Dec., 1896. Both lungs being in second or third stage. Abundant purulent expectoration, with numerous the. Evening fever of 38° to 39° C. Chronic diarrheas. Loss of appetite. Patient lived from aims, in the worst misery.	Treatment with X-rays began on the 2d of April, 1897, and lasted for a month.	Patient lying in a bed, tube placed over the sick parts, distance from target to the skin 20 c. m. Time of exposure, 10 minutes, and treatments three times a week. A Ruhmkorff's coil of 35 c.m. spark length, with Gaiffe interruptor.	At end of treatments there was persistence of the fever, diarrheas, cough, anorexia; decrease of the strength. No local improvement. No change of expectorate, that still contained tubercle bacilli. Died, end of May.
1—M. Bergonie et M. Ch. Mongeur. 2—Male. 3—41 years. 4—Four months. 5—Four months. 6—Yes. 7—No. 8—Unimproved.	Alcoholic. Acquired tuberculosis. Began at the end of 1896. Cavities in the left lung; foci of "ramollissement" at the top of the right lung. Numerous tubercle bacilli in sputum. Evening fever every day. Appetite diminished.	Got X-Ray treatments regularly during May, 1897.	The same as in previous case.	After an absence of 15 days, came back to the hospital, with aggravated symptoms. No change in general condition; persistence of fever; the expectorate of the same character as before.
1—M. Bergonie et M. Ch. Mongeur. 2—Female. 3—25 years. 4—Six years. 5—Yes. 6—No. 7—No. 8—Unimproved.	Diseased since 1890. Lesions of lungs on both sides, of second degree, in front and behind, especially advanced on left side, where some cavity spaces can be heard. No fever. Loss of appetite. Progressive emaciation. Weight (May 24), 45 kilo. Purulent expectoration, with numerous the.	Had very regular treatments with X-rays for one month and a half.	The same as in two previous cases.	With exception of a slight diminution of night sweats, no change, either in local or general condition. June 16, weight, 42 kilo. Sputum contains the, persistence of apyrexia.

<p>1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.</p>	<p>Record of Disease.</p>	<p>Treatment.</p>	<p>Technique.</p>	<p>Changes in Condition during and after Treatment.</p>
<p>1—M. Bergonje et M. Ch. Mongeur. 2— 3—Female. 4—33 years. 5—Eight years. 6—Yes. 7—No. 8—Improved generally and locally in beginning. Later dyspeptic troubles, and treatment was discontinued.</p>	<p>Sick since 1888. Left lung diseased in second degree at top. Right lung, induration found only on back. No fever. Loss of appetite and strength. Weight, 52.9 kilo. Dyspepsia. Night sweats. Cough, especially in morning. Purulent expectorate, with tbc. Face pale, cachectic. Tenderness on pressure against chest wall on left side upwards.</p>	<p>Treatment with X-rays between March 20, 1897, and April 16. * Resumed between April 26 and June 4.</p>	<p>The same as in three previous cases.</p>	<p>April 30th. On left side, in front, no rales, but pleuritic friction, heard very distinctly. Behind, no pathological sound. Right side: Cracking rales numerous (this side not being exposed to rays.) General condition improved. Strength and appetite returned. Cough less frequent. Expectoration a little more abundant. Disappearance of night sweats and tenderness of chest wall. May 15th. Same condition. Appetite, however, has a tendency to decrease, and suffers distress after meals. Weight, 52.7 kilo. Later dyspeptic troubles, vomited everything, even milk. Progress stopped, and X-ray treatment was discontinued.</p>
<p>1—MM. Canteloup, Descomps et Rouillies. 2— 3—Female. 4—22 years. 5— 6—Yes. 7—Dermatitis in the front of the chest. 8—Improved.</p>	<p>In this case, four distinct period marked development and modification of disease. 1. In first period inflammatory signs predominant, with infiltration and softening of lung and elevation of temp. Nothing but insignificant medical treatment employed. 2. The second period characterized by application of X-Rays with exclusion of every other remedy, and by aggravation of general condition. It extended from the 7th to the 20th of February. New agent caused a crisis, with a remarkable decrease of temperature, but general progress of disease not otherwise influenced since from the 20th temperature was 39.6° C. There was an improvement in the right fossa subclavic. Dermatitis. 3. Twenty-one treatments given from behind. It was especially marked by the "getting dry" of both lungs, diminution of the cough, and expectoration, complete disappearance of tbc.; but no change in general condition, which remained very grave, with elevation of temp. 4. After employment of the rays, patient took nourishment. Continuation of healing of the pulmonary lesions, diminution of cough and tbc. Easy and profound respiration. Disappearance of diarrhea and return of physical and mental strength. The temperature alone remained elevated (38.5° C. in the evening).</p>	<p>X-ray treatment; 30 sittings. No other treatment.</p>		<p>Improvement of the local symptoms, cough and expectoration. Disappearance of diarrhoea. Return of physical strength. Temperature remains elevated.</p>

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—M. Bergonie et M. Ch. Mongeur. 2—Female. 3—28 years. 4—Yes. 5—No. 6—Improved in general health. Local condition unchanged.	Acquired tbc. Both lungs attacked. L. lung, cavities at the top, behind. R. lung, numerous foci of softening in front and behind. Tbc. found. No fever. Loss of strength and appetite. Tuberculous lymphitis.	Treatment with X-rays began on May 12, 1897; was suspended on May 25, and resumed on June 5 to 15. Eleven sittings altogether.	The same as in other cases.	After three treatments felt much improved. Return of appetite and strength. Diminution of cough. No change of lesions. No modification of sputum. Weight stationary. Was compelled to suspend treatments and resumed then with much desire. Improvement from first three sittings, that had begun to pass away, was again noticed quite as distinctly.
1—Finley Ellingwood, J. E. Gillman, and Preston Pratt. 2—Andrew Gorgon. 3—Male. 4—21 years. 5—Ten Years. 6—Yes. 7— 8—Improved.	No history of tbc. in family. Eleven years old, he caught a cold, since which time has had a cough. Lung diseased; a considerable cavity was diagnosed at apex. Tbc. found in large numbers. Had appetite, but was unable to digest food. Weight, 74 lbs. Very weak, and unable to walk any distance. On May 20, 1896, when X-Ray treatment began, temperature was 103½°; pulse 100; respirations 34.	Treatment by X-rays began on May 20, 1896. Besides, he had some medicine for dyspepsia.		After three treatments, patient reports cough lessened. Hungry for meals. Sleep restful. Complains that he desires urgently to evacuate bladder after treatment. After nine treatments: Still complains of necessity to urinate immediately after treatment. Able to walk easily. Appetite and digestion very good. Sleep restful. Cough lessened. No night sweats. Bacilli still numerous. Can walk six to eight blocks without being tired, and feels good. June 23, 1897: Dr. Gilman reports: A. G. is in fair health. No fever or night sweats. Good appetite. Sound sleep. Can walk for miles without great fatigue. From day he took his first treatment has never had slightest hemorrhage from lung. Can take a deep breath without coughing. Dr. Pratt reports that this patient died July 9, 1900, from blood poisoning caused by stepping on a nail. He had just then recovered from an attack of pneumonia.
1—H. Preston Pratt. 2—Mrs. L. B. 3—Female. 4—37 years. 5—One year. 6—Yes. 7—Auto-intoxication. 8—Improved.	Had bronchitis and expectorated blood a year ago. Since that time has grown weak, lost flesh. Sputum: yellowish, greenish. Appetite poor. Sleep interrupted by persistent coughing. Menses regular. Rise of temp. every afternoon. Temp. 100°, pulse, 100; respirations, 36. Breathing shallow; right lung consolidated at apex and had a cavity.	Treatment by X-rays began in the middle of April, 1896. First treatment lasted one hour. Treatment stopped Nov. 14, 1896. Afterwards got tonics, as cod liver oil, maltine.		May 25: Lost 25 pounds. Temp., 100.3°; pulse, 96; bronchial rales. Tbc. in sputum in moderate numbers. Nov. 14, 1896: Sputum shows tbc. present in moderate number; decrease in number since last examination. Clinical appearance improved also. On examination, March 30, 1903, was improved in every way. Weight, 155 pounds; pulse, 76. No rales in lung.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—H. Preston Pratt. 2—Male. 3—Male. 4— 5— 6— 7— 8—Died.	Laryngeal and pulmonary tuberculosis.	April 19, 1896, was exposed to the X-ray one hour each day, for over a week.		Business called him away from city. He took a cold, and had an attack of pneumonia, from which he died.
1—H. P. Pratt. 2—Mrs. A. 3—Female. 4— 5— 6— 7— 8—Recovered.	Suffered from pulmonary tuberculosis.	Treatment began July 16, 1896. Took daily treatment of one hour each for two months.		
1—H. P. Pratt. 2—Mrs. H. 3—Female. 4— 5— 6— 7— 8—Recovered.	Suffered from pulmonary tuberculosis.	July 16, 1896. Treated daily for one hour, about four months.		Discharged cured. Examined thirty days ago, March 30, 1903, and found perfectly well.
1—H. P. Pratt. 2—Will C. 3—Male. 4— 5— 6— 7— 8—Died.	Suffered from pulmonary tbc.; was brought to laboratory, on a stretcher, too weak to walk, being in last stages of the disease.	September 10, 1896. Treated for about 30 days.		Went home and died a month later. Ray had a decided effect on temp., pulse and respiration.
1—H. P. Pratt. 2—Mrs. W. W. 3—Female. 4— 5— 6— 7— 8—Died.	Was referred to me for treatment, suffering from pulmonary tbc. in last stage of disease.	September 16, 1896. Daily treatments of an hour each, until 24th of December.		Died on February 19, 1897.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—H. P. Pratt. 2—Miss F. 3—Female. 4— 5— 6— 7— 8—Died.	Suffering from pulmonary tbc. Having been a vegetarian, refused to eat meat, and, living on a few nuts and a few grapes, which constituted daily diet, she starved to death.	September 18, 1896. X-ray treatment began.		In this case X-Ray acted as a powerful stimulant.
1—H. P. Pratt. 2—Dr. B. 3—Male. 4— 5— 6— 7— 8—Improved.	Suffering from pulmonary tuberculosis.	September 26, 1896. Treated off and on for about 3 months.		Improved very much. Went to Denver. Still living, enjoying good health.
1—H. P. Pratt. 2—Mrs. S. 3—Female. 4— 5— 6— 7— 8—Improved.	Suffering from pulmonary tuberculosis.	October 5, 1896, began X-ray treatment.		Improved under our treatment, and is today living and enjoying reasonably good health.
1—H. P. Pratt. 2—Miss W. 3—Female. 4— 5— 6— 7— 8—Recovered.	Suffering from pulmonary tuberculosis.	November 16, 1896. Treated for about 3 months.		Was discharged cured. Alive today, and in excellent health.
1—H. P. Pratt. 2—Mr. A. 3—Male. 4— 5— 6— 7— 8—Died.	Suffering from pulmonary tuberculosis.	November 21, 1896. Treated about thirty days.		Seemed to improve, but unable to come to office for treatment, finally succumbed to disease.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Gordon G. Burdick. 2—Wm. F. 3—Male. 4—28 years. 5— 6—Yes. 7—No. 8—Improved.	Had been under treatment for 4 months, was steadily growing worse. Temp., 101° and streptococci.	Treatment with X-ray was given at request.	Twice a week, with a very high vacuum tube.	No special improvement was noticed for four weeks, when he began slowly to improve and gain in weight; slept better; sputa lessened in amount, became more liquid, and contained less bacilli, fever gradually left him, until at end of ten weeks he was discharged. Bacilli are still found, but he is in good health, working every day.
1—Gordon G. Burdick. 2—M. L. 3—Female. 4—24 years. 5—5½ months. 6—Yes. 7—No. 8—Recovered.	Poorly nourished. Developed pulm. tbc. five months before consultation. Hemorrhage. Both lungs involved. Great number of tbc. Very feeble and exhausted.	Treated with X-ray and tonics.		Improvement rapid. Increased in weight from 93 to 118 pounds. Works 12 hours daily, as waitress. Tbc. only found twice last year.
1—Boido and American Electro-Therapeutic and X-Ray Co., Feb., 1903. 2—Miss L. W. 3—Female. 4—15 years. 5—1½ months. 6—Yes. 7—Developed a light dermatitis. 8—Recovered.	Mexican girl. Pale and sparingly built. No history of tbc. in family. About a month and a half ago began to complain of pain over left scapular region, with cough and afternoon fever; loss of appetite and six pounds loss in weight. Came to the office on Jan. 15, 1901, with hacking cough and raising a little bright red blood. Microscopical examination of sputum revealed a few scattered tbc., and physical examination showed typical case of incipient tbc. affecting upper part of left lung.	X-rays applied for first time, Jan. 16, 1901, for ten minutes, using hard tube. Also start a codoin mixture and iron tonic. Treated for three months, receiving fifteen-two treatments with X-rays.	Technique employed is a 16-plate stationary machine, using a medium hard 30-35 German tube, with idea of producing a dermatitis as soon as possible in each case, then resting for a few days, till the latter got well, then beginning over again. Tube was held three and four inches from chest anteriorly and posteriorly, employing five minutes for each side.	After seven daily treatments developed a slight dermatitis in upper part of chest. Her rest was taken for three days. Her temperature the first four days was 102°, 102°, 103°, 102°. Next ten days her temperature ranged between 100° and 101°, and next ten days temperature dropped to 99°. Gradually improved, gained ten pounds in weight, is today practically well. Six months ago a guinea pig injected with her sputum, is also alive and well.
1—Boido and Boido. 2—Mrs. C. G. 3—Female. 4—27 years. 5—Six months. 6—Yes. 7—No. 8—Died.	Two sisters died of consumption, mother and father alive and well. Came to us Jan. 28, 1901. Sick about six months with cough, daily fever, night sweats; had lost 25 pounds; loss of appetite, pain over both scapular regions. On physical examination both lungs in third stages of tbc., with cavity in lung. On microsc. exam. of the sputum it revealed large numbers of tbc. also streptococci.	Put on X-ray treatment, Jan. 28, 1901. Some auxiliary medicines for distressing symptoms. Received forty X-ray applications in two months.	The same.	No results, having a temp. of 103° to 105°. At end of two months she passed on to another doctor's care, and finally died in October same year.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Boido and Boido. 2—S. C. 3—Male. 4—19 years. 5—Two months. 6—Yes. 7—Got three burns. 8—Recovered.	Working in railroad shops. Mexican. negative family history. Pronounced incurable by his physician. Came to us on Jan. 10, 1901, complaining of cough, with bloody sputum at times; night sweats; pain over left lung; loss of appetite and some eight pounds in weight during the last two months, that being about time when he first began to get sick. Temp. on this day was 101°. On microsc. examination of sputum, a few tbc. were found. Case was pronounced by us as an incipient one, and placed on X-Rays.	X-ray treatment. He was treated for three and one-half months, and receiving during that time 58 applications. Got also deep breathing exercises, with aid of nebulizer.	The same.	Pain disappeared from right lung after third treatment with X-Ray. Temp. began to decline after sixth. He gradually improved, and gained ten pounds in weight, and is today driving a freight train to mines. Three months ago guinea pig injected with his sputum, is alive and well.
1—Boido and Boido. 2—Mrs. L. H. 3—Female. 4—38 years. 5—Three months. 6—Yes. 7—Developed a dermatitis after third treatment, which lasted ten days. 8—Unimproved.	Negative family history. Mexican. Came to us Feb. 16, 1901. Previous health good, until three months ago began to have cough, loss appetite, night sweats, pain over left shoulder. Sputum at times streaked with blood, a few tbc. were found. Had lost 15 pounds in last three months, lately had become hoarse, with tbc. of larynx. Temperature was 101°.	Put on nebulizer and X-ray, with a heroin mixture for cough. Was treated for 3 months, and received forty applications.	The same.	Slight improvement. Discontinued treatments, on account of financial reasons. Still had a temp. of 99°, and some hoarse. Has not gained in weight at present; coughs, can hardly speak above a whisper, it is certainly only a matter of short time before she dies. The only thing that can be said in favor of this case is that the short time that she was treated prolonged her life beyond usual limit, that majority of these Mexican lungers live. Still alive, and goes about.
1—Boido and Boido. 2—Miss C. B. 3—Female. 4—19 years. 5—Three months. 6—Yes. 7—Burnt twice during 2 months. 8—Died.	Mexican. with a negative family history; came to us Feb. 6, 1901, for cough with bloody streaked sputum at times; afternoon fever; loss of appetite and some ten pounds in weight during the last three months, this being about the time when first took sick. Previous health had always been good and her occupation that of a seamstress. Found her left lung was affected, and some doubts about the right one. Some tbc., and her temperature on the above date was 102°.	Was put on X-rays and some auxiliary remedies for cough and fever for two months, receiving 28 applications of X-rays.	The same.	Did not improve much, temperature ranging between 99° and 101°. Passed on to another doctor's care for a while. Died last April, 1902.
1—Boido and Boido. 2—Mrs. A. P. 3—Female. 4—22 years. 5—Two months. 6—Yes. 7—No. 8—Recovered.	Mexican. Family history negative. Came to us Feb. 12, 1901, for lung trouble, that began two months ago with cough, fever, etc. Tbc. were found in sputum. Had lost ten pounds in last two months.	Treated 4 months, receiving 52 treatments with X-ray. Some auxiliary remedies used.	The same.	Temperature became normal in second month, and patient improved gradually. Is now working in a dry goods store, apparently well, having regained her loss in weight. Two guinea pigs injected four months ago with her sputum are still alive.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Boido and Boido. 2—P. S. 3—Male. 4—19 years. 5—1½ months. 6—Yes, guinea pig inoculated with sputum developed tuberculousis. 7—Five burms. 8—Recovered.	Mexican. Blacksmith. One brother died of consumption two years ago, otherwise family history negative. Came to us March 3, 1901, for cough, with bloody sputum at times; loss of appetite; loss of twelve pounds in last six weeks, which was about time his sickness began. No guinea pig injected with his sputum died in two weeks of tbc. Temperature on the above date was 101°.	Treated for four months with X-rays and nebulizer, receiving sixty-five treatments.	The same.	Temperature became normal after first month's treatment, and improvement was noticeable in every respect, gaining 15 pounds at end of the four months. The boy is well today and working at his trade. Two guinea pigs that were injected four months ago with his sputum are alive and well today.
1—Boido and Boido. 2—Mr. P. S. G. 3—Male. 4—35 years. 5—Three months. 6—Yes. 7—No. 8—Recovered.	Mexican farmer. Family history negative. Came to us Dec. 28, 1900, for lung trouble of three months' standing. Has lost 15 pounds during that time, now has a temperature of 101° in afternoons, with cough and bloody sputum at times; night sweats, etc. No tbc. found in sputum on different examinations during the month of January, 1901. Was only treated with nebulizer and auxiliary remedies, with slight improvement. On Feb. 3, a few tbc. were found in a greenish sputum, expectorated in the early morning.	He was placed on X-rays for 3 months.	The same.	Afternoon temperature disappeared, but there was still some cough mornings. Gained five pounds while being treated, but lost them again. Came to office two weeks ago, and has not had any more fever since he stopped treatment; feels well; has not increased in weight and has some cough at times.
1—Boido and Boido. 2—Miss D. M. 3—Female. 4—22 years. 5—1½ months. 6—Yes. 7—No. 8—Recovered.	Mexican. Family history negative. Came to us on Dec. 10, 1900, for cough, fever 100°, loss of appetite and loss of eight pounds in last month and a half, when her sickness began. Few tbc. were found in her sputum.	She was put on X-rays for 3 months. Some auxiliary medicines for cough.	The same.	Improved slowly, but after end of three months, when treatment was stopped, fever disappeared, as well as cough, and she is today apparently well, having gained 15 pounds.
1—Boido and Boido. 2—Mrs. P. R. 3—Female. 4—30 years. 5—About two months. 6—Yes. 7—No. 8—Improved.	Mexican. Mother of three children. Family history negative. Came to us on March 6, 1901, for cough, with bloody sputum at times; temp., 100°. Loss of appetite and loss in weight of 10 pounds during last two months. Has been sick about two months. Tbc. and streptococci were found with the microscope.	Treated with X-rays for two months; then rest for a month and X-rays for one and one-half months. Symptomatic treatment beside.	The same.	Little or no improvement after first two months' treatment. After resting one month, she noticed some improvement in cough, and a gain in her appetite. Again, one and one-half months' treatment, with no marked improvement. Three months later came back to office and stated that she felt well, only her weight was the same. We saw her again one month ago, and still she lacked ten pounds in weight, and had a slight cough at times. No tbc. could be found in sputum.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Boido and Boido. 2—Y. S. 3—Male. 4—45 years. 5—About three months. 6—Yes. 7—No. 8—Recovered.	Mexican laborer. Family history negative. Came to the office to consult us April 4, 1901, for cough, pains in right lung, fever every afternoon, and loss in weight of 12 pounds in last two months. Has been sick about three months. On examination of sputum, it was found to contain a few tub. His temperature was 101° F.	Treated for three months, receiving 45 applications of the X-rays, and some auxiliary medicines.	The same.	Temperature became normal during second month and cough, at the end of third month, disappeared. Gained five pounds in three months, and has apparently been well ever since. Is at present working in some mines.
1—Boido and Boido. 2—F. C. 3—Male. 4—22 years. 5—About six months. 6—Yes. 7—Three burns. 8—Died.	Mexican farmer. Family history negative. Came to us on April 12, 1901, for cough, hemorrhages from lungs, afternoon fever, etc. Has been sick about six months. Has lost 25 pounds. On physical exam. a cavity was found in left lung, and right lung was also affected. Large number of tub. and chains of streptococci in sputum. Temp. 103°.	Treated with symptomatic remedies for cough, fever, for 3 months, and received 42 treatments with the X-ray.	The same.	No beneficial effects. Died soon afterward, having been sick eleven months.
1—Boido and Boido. 2—Miss Y. P. 3—Female. 4—19 years. 5—Seven weeks. 6—Yes. 7—Burnt four times. 8—Recovered.	Mexican girl. Family history negative. Came to us on April 25, 1901, for cough, pain in chest, afternoon temp., and a loss of eight pounds in weight in last month and a half. Her temp. on above date was 100°, coughing and raising a sputum streaked with blood. Has been sick about seven weeks. Tub. found on second examination.	Treated 4 months with X-rays and some auxiliary remedies. Received 52 treatments.	The same.	Temperature became normal after first month, and cough disappeared in third month. She gained 12 pounds since she stopped the treatments, and is today apparently well and healthy.
1—Boido and Boido. 2—Miss T. R. 3—Female. 4—26 years. 5—About two months. 6—Yes. 7—No. 8—Recovered.	Mexican. Family history negative. Came to consult us on Mar. 25, 1901, for cough, pain in chest, afternoon rise of temperature, etc. Has been sick about two months, having lost some ten pounds during that time. A few tub. in sputum.	Treated with X-rays for 3 months, receiving 25 applications. Internally, creosote.	The same.	Improved slowly at first, but third month temperature became normal, cough disappeared, and gained five pounds. She is today apparently well, and has regained her ten pounds. Two guinea pigs that were injected with her sputum three months ago are alive and well.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Samuel B. Childs. 2—Mrs. S. 3—Female. 4—39 years. 5—About one year. 6—Yes. 7—No. 8—Improved.	Family history negative. Disease contracted in Chicago, spring of 1911. Patient came to Denver shortly after. Has been under care of leading specialist greater part of time. Consulted me, May 24, 1902, about a year after her arrival in Colorado. Was coughing and expectorating freely mornings, and after meals. Tbc. present in sputum. Weight about normal. No elevation of temperature was detected. Both apices affected. The left was consolidated to second rib. Anteriorly prolonged expiration and bronchial breathing were present in this area, and moist rales could be plainly heard below clavicle, especially numerous near its juncture with sternum. Moist rales were detected posteriorly at superior angle of scapula in both the right and left lungs.	X-ray exposures commenced May 24, and from that time to Sept. 26, 76 treatments were given.	The chest and back were exposed on alternate days, and had sufficient penetration to make had disappeared from lungs, September 26th. The consolidation and bronchial contents of thorax plainly visible on fluoroscopic screen.	August 6th, nine weeks after the exposures were commenced, expectoration had entirely ceased, and there has been no recurrence of it. The signs of moisture had disappeared from lungs, September 26th. The consolidation and bronchial breathing were still present.
1—K. Sandberg. 2—Mr. H. A. 3—Male. 4—41 years. 5—About three months. 6—Yes. 7—Slight dermatitis developed on the back. 8—Unimproved.	Took sick in Feb., 1903, with fever, cough and expectoration, gradually grew worse and in the end of March he had several hemorrhages from the lung. He was confined to bed and treated for the hemorrhages. On April 11th, he showed: Under the right clavicle and externally to apillary line, a circumscribed area, with dullness on percussion and bronchial respiration. Left lung free. Temp., 99.8° morning; 100.2° evening. May 18th: Area has increased considerably. Left lung free. Temp. has varied between normal morning and 103.6° evening. Pulse between 84 and 108. The condition is steadily growing worse. On May 22d was put on X-Ray treatments. He was assisted out of bed, down the stairs and wheeled in an invalid chair to the laboratory 1½ blocks away. Weight, 110 pounds. Tbc. in large numbers in sputum. Scialograph shows affection of the right lung almost in its entirety. June 10: Treatments were stopped, because patient became exhausted from being carted to and from the X-Ray room. In addition to the X-Ray treatment, he used iron and quinine as a tonic.	He got 18 treatments of 15 to 20 minutes' duration between May 22 and June 10.	Coil, with 16 inches spark length. Alternating current with electrolytic interrupted. Tube of rather high vacuum. Strong current. Got treatment from front from above and from behind. Five minutes from each direction.	August 3d. During and after treatment, patient stayed in bed all the time. Temperature ranged between normal and 103.6°. The local process shows signs of gradual increase. October 8th: Patient still in bed, temperature 100.4°. Pulse 112. Fairly good appetite. Local process as before. Left lung still healthy. Nov. 25th: In bed. Looks better. Appetite very good. Sleeps well. Still coughing and expectorating, as before. Temperature, 100°; pulse, 120. Local process: Right lung—dullness, but not absolute, both over front and back of the lung. Rales can be heard all over lung, but not very numerous. Some pleuritic friction sounds on the back below. Left lung—negative. He developed tuberculosis of the larynx and died Feb. 19, 1904.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Dr. K. Sandberg. 2—O. S. 3—Male. 4—35 years. 5—Two months. 6—Yes. 7—Light X-ray dermatitis. 8—Improved.	<p>Examination, June 15, 1903. Works for wholesale grocer. Sick two months, with two hemorrhages from lungs, and diarrhoea. Dry cough since. Lost flesh first, gained again since. Had some night sweats, but not at present. Pulse, 100; respirations, 15; temp. 99.7°. Bowels regular. Appetite good. Tongue coated. Weight 138 pounds. Has been advised change of climate. Physical examination: Respiratory movements less on left side. Left shoulder lower. Also depression above and below left clavicle. Percussion sound a little shorter on left side. By auscultation one crackling sound to be heard above left clavicle and spina scapula.</p> <p>June 20. Examination of sputum shows numerous tubercle bacilli.</p> <p>June 25, 1903. Has felt good, better than formerly, has good strength and sleeps good. Appetite good and bowels regular. No headache, no night sweats. Coughs some expectorates a little, mostly mornings, but there has been no sign of blood in it. Temp. 99.4°. Pulse, 96. Respirations, 20. Weight 141 pounds. No rales to be heard. Respiratory sounds over left apex are somewhat hollow.</p>	He got 15 X-ray treatments between June 15 and July 3, and got at the same time capsules containing quinine, arsenic and guaiacal carb.	As above.	This patient was favorably influenced by the treatment. He increased in weight to 141½ pounds. Night sweats ceased; cough and expectoration diminished, and he felt strong and good; but physical symptoms remained almost unchanged, and temperature was always a little above the normal.
1—Dr. K. Sandberg. 2—Mrs. S. J. 3—Female. 4—28 years. 5—Three weeks. 6—No. 7—Light X-ray dermatitis. 8—Recovered.	<p>August 17, 1903. Examination. Housewife. Four children, youngest eight months old still nursing. Last three weeks sick with "cold," headache, weakness, loss of appetite. Coughs, but very little expectoration. Chills and heat feelings. Has lost considerable flesh. Weight, 103 pounds. Sleeps well. Pulse, 100; respirations, 25; Temp. 99.8°. Bowels constipated. Poor appetite. Tongue slightly coated. Looks thin and poorly. Slight dullness over apices. Some occasional rales over the right apex.</p> <p>August 27. Examination of sputum, negative. X-Ray photograph shows a darkening on right side, in lower part of chest. Weight, 107 pounds.</p> <p>September 4. Weight 111 pounds; temperature, 99.2°; pulse, 88; respirations, 22.</p>	She got 15 X-ray treatments between August 19 and September 4, and at same time got capsules containing quinine, guaiacal carb and ferric arseniate.	As above.	<p>This patient recovered. She gained in weight steadily and weighed on 13th day of November last, 114 pounds. Cough and expectoration ceased, and feels now strong and better than she ever did. But still there is some dullness over lower part of right lung posteriorly, and slightly decreased respiratory sounds.</p> <p>The case was considered to be one of the of the lung with loc. pleuritis, January 23, 1904. Feels entirely well, sleeps well, has good appetite, feels strong and does all household work, washing included. No headache, no cough, no night sweats. Weighs 117 pounds.</p> <p>Temperature, 98.4°; pulse, 76; respirations, 24. Right shoulder is a little lower than left and respiratory sound over lower part of right lung posteriorly not as strong as on the other side, otherwise everything seems normal.</p>

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Dr. K. Sandberg. 2—Mrs. C. C. 3—Female. 4—28 years. 5—Yes. 6—Severe X-ray dermatitis developed. Not healed Jan. 7, 1904. 7—Improved.	August 18, 1903. Examination; Housewife. Complains of loss of flesh and strength for sometime. Coughs and expectorates. Weight, 119 pounds. Sputum, negative. X-Ray picture taken of lungs shows left lung affected throughout. August 31. Tbc. found in sputum. Temp., 98.6°. Good appetite. Weight, 121½ pounds. September 7. Feels stronger. Coughing about same. Pulse, 112; respirations, 20; temp., 98.6°. Appetite good. Percussion does not seem to give any difference between both sides. On auscultation a few crackling sounds can be heard on left side below clavicle. Weight, 124 pounds.	She got 15 X-ray treatments from September 1 to September 16, and stayed in hospital during this time. Got inhalations and capsules of quinine, guaiacol carb., and ferr arsenati.	As above.	Being homesick she went to her home in the country earlier than intended, but much improved in every respect. An exacerbation of disease took place, and on 23d of October, when examined, following was found: Pulse, 120; respirations, 24; temp., 101.6°; weight, 125½ pounds. Right lung negative; over left lung rales and sibil; decreased respiratory sounds. Appetite poor. Perspires much. She reports herself now Jan. 7th somewhat improved again but still suffering considerably from the X-Ray burn.
1—Dr. Marie A. Olson. 2—Mr. J. F. 3—Male. 4—17 years. 5—Four months. 6—Yes. 7—No. 8—Died.	October 23, 1903. History of disease: Father died from pulm. tub. one year ago. Was taken ill last July with cough, expectoration. Has been treated with rectal injections and with X-Rays. St. pr.: Very pale. Weight, 110 pounds. (Has weighed 144 pounds.) Coughs and expectorates considerably. No night sweats. Good appetite. Regular bowels. Temp., 99°; respirations, 12; pulse, 140. Dulness, over whole left side of chest in front, and posteriorly, and numerous rales, coarse and fine, from top to base. No dullness over right lung; but on auscultation some fine rales in r. reg. subclavic., and some coarse at the base of lung. October 24. Numerous tbc. in sputum. Temp., 103.4°; pulse 140. Skiagraph taken; shows both lungs involved, but especially left one. Urine contains a small amount of sugar; no albumin.	He got only five treatments, and discontinued them. Was treated at same time with oil of cloves.	As above.	No marked influence. His temperature, pulse and respirations remained same. The physical symptoms same. Died beginning of December.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Dr. K. Sandberg. 2—Mr. T. R. 3—Male. 4—20 years. 5—Eight months. 6—Yes. 7—No. 8—Subjective improvement; otherwise no change.	November 12, 1903. Examination: Works in machine shop. Sick since March this year, when he got a cold. Since then has coughed and expectorated. No pains. No night sweats. Appetite variable. Sleeps well. No tbc. in family. Present state: Tall, slim man; pulse, 132; respirations, 16; temperature, 101.4°. Not very much cough or expectoration. Some dullness and tympanic sound above and below left clavicle. Cracking and suckling rales over anterior part of left lung and posteriorly down to end of scapula. Right side negative. Sputum contains tbc. in considerable number. Weight, 131½ pounds. Skiagraph shows left lung affected almost in its entirety.	He got 20 X-ray treatments between November 12, and December 6.	As above.	The treatments seemed to benefit him; felt better, could breathe deeper and easier after each treatment. All the time he had good appetite and slept well. Cough and expectoration decreasing. Physical signs did not change. Temperature about same all the time. Weight decreased to 129½ pounds. He discontinued the treatment to go to Norway to his parents.
1—Dr. K. Sandberg. 2—Mr. F. N. 3—Male. 4—30 years. 5— 6—No tbc. were found in sputum examined. Expectorated was very scant. 7—None. 8—Recovered.	No tbc. in family. Personal: Previous health good, present ailment began two months ago, pain in chest, cough and expectoration of thick greenish mucus. Consulted doctor and improved. Two weeks ago grew worse with more severe cough and pain over sternum and left lower side of chest, especially when coughing or breathing deeply. His cough is harsh and dry. No appetite. Was sent to hospital by his physician with diagnosis of, pleurisy with effusion, to be tapped. Physical examination: Tongue coated, temp., 98.4°, pulse, 84, respirations, 20. Chest: right side negative or normal sounds exaggerated, left side, respiratory movements lessened, intercostal spaces bulging slightly, percussion gives flatness over entire chest except at apex. On palpation heart beat can not be felt at apex. Vocal fremitus absent. The condition was diagnosed tbc. of the left lung with pleuritic effusion. Advice was given against tapping and for X-Ray treatment. Weight, August 29, 1903, 137 pounds.	Was given 15 X-ray treatments, and in addition Elix. I. Q. S., one drachm three times a day.	The same.	Improved rapidly his cough gradually stopped and expectoration ceased, pains left him, his appetite increased and he gained in flesh.

1—Case Reported by. 2—Name of Patient. 3—Sex. 4—Age. 5—Duration of Disease. 6—Tub. Bac. found or not. 7—Complications. 8—Result.	Record of Disease.	Treatment.	Technique.	Changes in Condition during and after Treatment.
1—Dr. A. B. Oyen. 2—Mrs. O. N. 3—Female. 4—22 years. 5—Found in great numbers in the sputum. 6—A slight X-ray dermatitis that quickly subsided. 8—Improved.	When twelve years old fell and hurt left shoulder and it pained some time. Four years ago weighed 142 pounds; one year ago 130 pounds, now 115½ pounds. A year ago when chopping wood suddenly got a pain in left shoulder and could not use it any more. Diagnosis: Pulmonary and peritoneal tbc. Scatograph of the left shoulder shows what appears to be tbc. destruction of this joint. She has been coughing and expectorating. Temp., 99.2°, pulse 94, respirations 20. Tbc. nodules can be felt in the abdomen.	Being referred for treatment for peritonitis was given 20 treatments to the abdomen with the tube placed horizontally over this, the target in height with the umbilicus and exposures given for five minutes to each side of the abdomen. The rays would in this position also strike from below up through the chest cavity.		Improved steadily. The pains in the abdomen disappeared and also the nodules. Tenderness now only around umbilicus. Coughs still a little but much less than formerly. Has a good appetite and sleeps well. Temperature 98.1, pulse 82; respirations, 20. Weight, 124 pounds.

WEST SIDE BRANCH.

A regular meeting of the West Side Branch of the Chicago Medical Society was held at the Cook County Hospital, Thursday evening, March 17th, 1904, at 8:30 p. m. the President, I. W. Danforth in the chair.

Minutes of previous meeting read and adopted.

The banquet committee through its Chairman W. M. Fitch, reported that the banquet held in place of our regular February meeting had been a success; that the attendance was large and a grand social time was enjoyed by all present.

On motion of Dr. Mefford the report was adopted, the committee continued until the April meeting, at which time the financial part of the report will be adjusted.

On motion Dr. Fitch, the Secretary was instructed to write a letter expressing the sympathy of the Branch to Mrs. Dr. M. R. Clarke on the death of her husband, and also to notify the Secretary of the Chicago Medical Society of the death of Dr. Clarke.

The scientific part of the evening was given over to a symposium on the subject of **Pulmonary Infections.**

The Etiology and Bacteriology of Pulmonary Infection with Especial Reference to the Pneumococcus.

Edward C. Rosenow: In the short time allotted for the preparation and presentation of this paper, it was deemed inadvisable to attempt a complete discussion of the bacteriology of pulmonary infections, but to limit my remarks briefly to the role the pneumococcus plays in the etiology of pulmonary lesions and only incidentally to the role played by the streptococcus and other micro-organisms.

Of the pathogenic bacteria present normally in the respiratory tract the pneumococcus of Fraenkel is probably the most constant. In fact the respiratory tract of man and animals has been considered by some investigators as its normal habitat.

A knowledge of these facts will help us to understand why this micro-organism figures so highly in the etiology of pulmonary infections, not only in the form of lobar pneumonia, but also in the more atypical broncho-pneumonias or the so-called capillary bronchitis, and it would seem likely that even in the ordinary types of acute bronchitis with no consolidation, this micro-organism may be conceived in this etiology.

The pneumococcus stands first as the etiologic factor of the primary and even secondary broncho-pneumonias of adults and children.

Netter reports 95 cases of broncho-pneumonia (53 adults and 42 children) he finds as did Wollstein in a series of 100 cases (all in children) that the micro-organisms causing this form of infection occur in the following order according to their frequency—pneumococcus, streptococcus, staphylococcus, pyogenes aureus. Mixed infection in broncho-pneumonia is so

often difficult or impossible to decide definitely which species is the etiologic factor.

Lobar pneumonia is the result of a pneumococcus infection in nearly all cases. Although the streptococcus is said to produce this type of infection occasionally, especially in the aged.

From a careful bacteriologic study of the blood of 145 cases of croupous pneumonia (see complete report in the *Journal of Infectious Diseases*, vol. I, No. 2, 1904) the following interesting facts are brought out.

1. Mixed infection in lobar pneumonia seems to be rare for in almost every instance with a positive result the pneumococcus was found in pure culture in the blood, etc. In several instances I was unable to decide finally whether the organisms isolated were streptococci or pneumococci by any method then available. Two cases of "influenzal" pneumonia showed pneumococci in the blood.

2. The pneumococcus was isolated from the blood in 130 out of the 145 cases examined. Only one culture was made in most instances. In five cases where the blood cultures made the diagnosis, the pneumococcus was found in the blood before there were any demonstrable signs of consolidation. It was found as early as 12 hours after the initial chill and as late as two days after the crisis.

3. At the time of crisis there seems to be a diminution either in the number or viability or both of the pneumococci in the blood.

4. High leucocytosis seems to be associated with fewer viable pneumococci in the blood stream.

5. Pneumococcemia in pneumonia does not mean an especially unfavorable prognosis. A careful analysis of my results shows no difference in the number of times positive results were obtained in the fatal and non-fatal cases.

6. Lobar pneumonia cannot be looked upon any longer as a surely local disease but rather as a general infection and hence the absurdity of expecting great results from the use of expectorants in the treatment of this disease.

7. How the pneumococcus which is presumably present normally in the respiratory tract, causing no symptoms, suddenly from the influence of exposure, etc., becomes highly virulent during the development of pneumonia is difficult to explain. For the following reasons one might consider lobar pneumonia a secondary localization in the lung of a previous blood invasion of pneumococci.

(a) The pneumococcus seems to occur regularly in the blood during pneumonia and has been demonstrated before any consolidation was present.

(b) In the rabbit I was able to show experimentally that when virulent pneumococci were injected into the trachea they rapidly penetrate into the circulating blood, and when injected into the systemic veins would soon appear within the alveoli of the lung.

(c) Fraenkel, Schultz and others have repeatedly produced pneumonia in animals from intravenous inoculations. Of the five rabbits in which pneumonia developed in my experi-

ments, three resembled broncho-pneumonia, and two quite typically lobar pneumonia in man. The former were the result of intra tracheal injections, the latter two received intravenous injections of virulent pneumococci.

Discussion.

In closing allow me to mention an observation which might be considered a rational explanation why alkaline waters and other alkalinizing agents, as mentioned by Dr. Ticken, are followed by such happy results, when the pneumococcus is grown in normal human serum, the reaction of the serum does not change, remaining alkaline, but when grown in pneumonia serum the reaction becomes highly acid.

Now if the pneumococcus by its growth, in the alveoli of the lung and blood of the patient produces acids as it does in the serum in the test tube, certainly some of the symptoms would seem to be the result of an acidosis and by giving these alkalinizing agents we aid nature in neutralizing the acids so produced.

W. M. Fitch read a paper on the *Influence of Cilia on Pulmonary Infections*, dwelling on the histology and physiology of the cilia and advising a method of respiratory gymnastics he makes use of in his practice with the view among other beneficial results, of keeping the cilia in a state of normal physiological activity, that they may sweep out infectious material from the bronchial tubes and bronchioles.

John A. Robison appeared by proxy for Dr. Corwin who was unable to be present and gave a most excellent talk on the *Clinical Aspects of the Pulmonary Infections*.

The treatment of pulmonary infections took the form of a general discussion, participated in by Drs. Teiken, Evans, Fantus, Boyce, Devault, Avery, Tice and Winters. Various views were expressed. The subject will be further considered at our April meeting, led by Dr. Herrick on *Complications and Treatment*.

We were pleased to have with us Drs. Sale and McBride of Tennessee.

Attendance 60. Adjourned to meet April 21, 1904.

J. J. Alderson,
Official Reporter.

CHICAGO PEDIATRIC SOCIETY.

Regular meetings held in Schiller Hall, the third Tuesday of each month from September to June, at 8 p. m. Membership 40.

Officers.

President M. P. Hatfield, 2979 Prairie ave.
Vice President S. J. Walker, 36 Washington St.
Secretary Emma M. Moore, 6025 Prairie ave

Chicago Pediatric Society. The regular meeting of the society was held in Schiller hall, Tuesday evening, March 15, 1904, with Dr. Hatfield in the chair. After the reading of the minutes the following papers were read:

1. Tonsillitis, J. S. Brown.
2. Thoracic Complications in Grippe, Wm. C. Williams.
3. Cause and Course of Pneumonia, F. S. Churchill.
4. Differential Diagnosis of Thoracic Dif-

ficulties Exclusive of Cardiac Disease, S. V. Balderston.

5. **Treatment of Bronchitis and Pneumonia,** J. W. Vanderslice.

The name of J. H. Hess was proposed for membership and on vote of the Society was referred to the executive committee for action.

The Milk Problem will be the subject for consideration in the April meeting.

Emma M. Moore, Official Reporter.

The Physicians Protective Association of Freeport.

The physicians of Freeport held their first annual banquet at the Brewster House, Feb. 17, 1904. An enjoyable time was participated in by all who attended. Songs and after-dinner speeches constituted the program. The ethical and business sides of our profession were discussed very freely and an organization started to further the interests of the same. An adjourned meeting was called on the following Wednesday evening, when a permanent organization i. e., "The Physicians Protective Association of Freeport Ill.," was effected. Officers were elected and rules and regulations were adopted. The Association meets four times every year.

R. J. Burns.

College Preparation for the Study of Medicine at the University of Illinois.

The teaching and the practice of medicine have made uncommonly rapid progress in the North-Central States during the last twenty-five years. This is due to the extraordinary growth and increasing complexity of medical knowledge itself, to the rapid development of the sciences of chemistry, physics, biology, physiology, and psychology, which constitute the foundations of modern medicine, and to a great increase in the number and the importance of the applications of these sciences to medical theory and practice. Preparation for success in medicine has consequently become a much more exacting and difficult task than it was in the youth of the present generation of active physicians. This difficulty has been met by those concerned in medical education in three different ways, from which the student must make his choice when he begins his preparations for his medical course.

(1) He may pass directly from the high school to the medical college, and take at the latter a four years' course containing, in addition to the strictly medical subjects, brief elementary courses in the sciences underlying medicine; (2) he may study for four years at a college of liberal arts, taking there his bachelor's degree, and follow with three years of scientific and professional study at the college of medicine; or, (3), he may so select and arrange an essentially scientific college course, and so combine with it medical studies taken as electives that, in meeting the requirements for the bachelor's degree, he shall at the same time advance himself a full year on his three years' medical course, thus virtually earning

the arts degree and the degree in medicine within six years.

The first of these alternatives, although very commonly chosen, is widely regarded by intelligent observers of medical progress as seriously and increasingly inadequate. It will probably be withdrawn by the medical colleges themselves as fast as they become independent of receipts from students' fees for their continuance. Educated opinion is everywhere rapidly tending to the view that the actual mastery of the science and practice of modern medicine requires a maturity of mind and a trained capacity best attained by a well chosen course of liberal college study. The mass and complexity of the matter now contained in the professional course in medicine has become so great as to demand the whole time and thought of a well-trained student for at least three years. A college course preceding the medical course is thus becoming more and more indispensable, both to the mastery of the latter and to a satisfactory professional career.

The medical colleges of the country, mainly dependent for their income, as most of them are, on the number of students attracted by their offerings, now graduate a much larger number of nominal doctors of medicine than can possibly make a successful beginning in that profession. In the competition resulting, the well-trained and broadly educated young physician has a decided advantage over the medical graduate who, hampered by a defective preparation, has hurried through an overloaded, composite four-years' course. The college-bred physician is thus coming to be recognized as belonging to a superior professional class, and the question is now often asked by those controlling appointments in connection with railroads, insurance companies and the like—appointments which carry with them both recompense and prestige—whether the candidate has any other than the medical degree.

In choosing a college course preparatory to medicine it must be remembered that medicine is a scientific profession. It consists mainly in special applications of the natural and physical sciences, and these sciences should, of course, strongly preponderate in the preliminary course. On the other hand, a reading knowledge of German and French is necessary to enable the educated physician to keep fully abreast of the progress of knowledge, and he needs also a broad and varied culture as a preparation for practice among all classes of his community.

In view of these facts the University of Illinois believes that it is doing its constituency an important service in offering to those intending to study medicine every reasonable inducement to prepare themselves thoroughly for that study by a strong and carefully chosen college course. It consequently offers to such students a special list of studies, mainly in science and language, known as the Preliminary Medical Course, so arranged that three years of it are taken at the University, and the fourth year at the medical school as a part of the regular medical course.

Upon completion of this four-years' course

the degree of Bachelor of Arts is given at the University. Upon completion of the medical course, commonly requiring two years additional, the degree of Doctor of Medicine is conferred at the medical college. It is the principle of this preliminary college course that certain of the medical subjects themselves, especially anatomy, pathology, and therapeutics, have, when well taught to students well prepared to take them, an educational value at least equal to that of the miscellaneous elective subjects of a college course, and that they consequently may properly be made the basis of college credit toward the bachelor's degree.

Description of the Preliminary Medical Course.

The principal studies of the three-years' course preliminary to medicine are two years of chemistry, a year of physics, a half year each of general zoology, vertebrate zoology, embryology, bacteriology, and psychology, a year of physiology and histology, two years of German or French, a year of Latin (unless an equivalent amount of Latin has been offered for entrance), a year of rhetoric and theme writing, and the physical culture and military science required of all University students. In most of their principal subjects, the preliminary medical students are taught as a separate group, to the end that their instruction in these subjects may be adapted in substance and in method to their subsequent study of medicine. Particular attention is paid in their scientific studies, to their training in those scientific methods of thought upon which the practical physician must depend in the diagnosis and treatment of disease.

To students able to afford the time and expense, a fourth year at the University is strongly recommended, the principal feature of which is a second year in physiology, the remaining studies being chiefly elective.

The Course by Years.—In the first year the student takes a course in drawing, especially intended to enable him to draw objects seen under the microscope; and his work in rhetoric and themes gives him training in clear and concise expression. In the sciences he takes general and qualitative chemistry throughout the year, and also general and vertebrate

zoology, with a brief course in trigonometry intended to prepare him for the study of his physics in the following year.

In the second year he continues the study of chemistry, taking up quantitative analysis and organic chemistry; takes a course in embryology, for which his zoological work has prepared him; and carries on his university course in physics. Along with these scientific subjects he takes his first year in German, or if this language was offered for entrance in place of Latin, he takes beginning Latin instead.

During the third year physiology is his major subject, his courses in chemistry, physics and embryology having well prepared him for rapid progress and high grade work in this department. He also studies normal histology, bacteriology and psychology, continuing at the same time his course in German.

A completion of this three-years' work entitles him to receive, at the medical school, credit for chemistry (general, qualitative, quantitative and organic and toxicology), biology, physiology, normal histology, embryology and bacteriology, leaving him substantially only the strictly professional subjects of his medical course. If he stays for a fourth year at the University, he continues in physiology and commonly takes French, together with such other branches as are best adapted to his individual needs.

If at the end of three years he enters the medical school, he takes there, as the fourth year of his course for the bachelor's degree and the first year of his medical course, freshman and sophomore human anatomy, the physiology of the special senses and the nervous system, therapeutics, general pathology, pathological anatomy, and surgical pathology. Upon the completion of these subjects he receives, at the next University commencement, his degree of Bachelor of Arts.

A catalog of the University containing additional details concerning these courses and offerings may be had on application to W. L. Pillsbury, Registrar of the University, and letters of inquiry concerning matters referred to in this circular may be addressed to S. A. Forbes, Dean of the College of Science, Urbana, Illinois.

Make arrangements to attend the Annual Meeting at
Bloomington, May 17, 18 and 19.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Suprarenalin in Pulmonary Hemoptysis.

The note by Dr. A. C. Bird on this subject is particularly interesting to me, as I have quite recently had a parallel case to his.

My patient, a young clergyman, was sent to this district about two years ago, suffering from pulmonary phthisis. In September of last year he had a rather severe attack of hemoptysis, which, however, rapidly subsided under the ordinary treatment—absolute rest in bed, application of ice, etc. On December 6th he had a second attack—a very severe one—and in spite of the ergot and opium (both internally and hypodermically) sulphuric acid, hazeline, terebene, ice locally and in the mouth, and absolute rest of body and voice, the copious coughing up of blood continued until the patient's pulse began to show signs of collapse.

On December 19th I prescribed a teaspoonful of 1 in 5,000 solution of Suprarenalin (Armour) three times daily, and from the giving of the first dose the condition of the expectoration changed, the bright red gave place to the "foxy" color, and after the third dose of Suprarenalin all trace of blood in the sputum had gone, and has not reappeared as yet.

I have still more recently used Suprarenalin in a second case of hemoptysis, with equally rapid results, and also in a case of fairly severe post-partum hemorrhage again, so far as one can tell, with excellent effect. Arthur S. Hadley, M. B.

Muscular Soreness and Rheumatism Due to Grip.

In speaking of the treatment of articular rheumatism, Hobart A. Hare, M. D., Professor of Therapeutics in the Jefferson Medical College and Editor of the Therapeutic Gazette, says: "Any substance possessing strong antipyretic power must be of value under such circumstances." He further notes that the analgesic power of the coal-tar products "must exert a powerful influence for good." The lowering of the fever, no doubt, quiets the system and removes the delirium which accompanies the hyperpyrexia, while freedom from pain saves an immense amount of wear, and places the patient in a better condition for recovery. The researches of Guttman show conclusively that these products possess a direct anti-rheumatic influence, and among those remedies, antkamnia stands pre-eminent as an analgesic and antipyretic. Hare, in the last edition of his Practical Therapeutics says: "Salol renders the intestinal canal antiseptic." This is much needed in the treatment of rheuma-

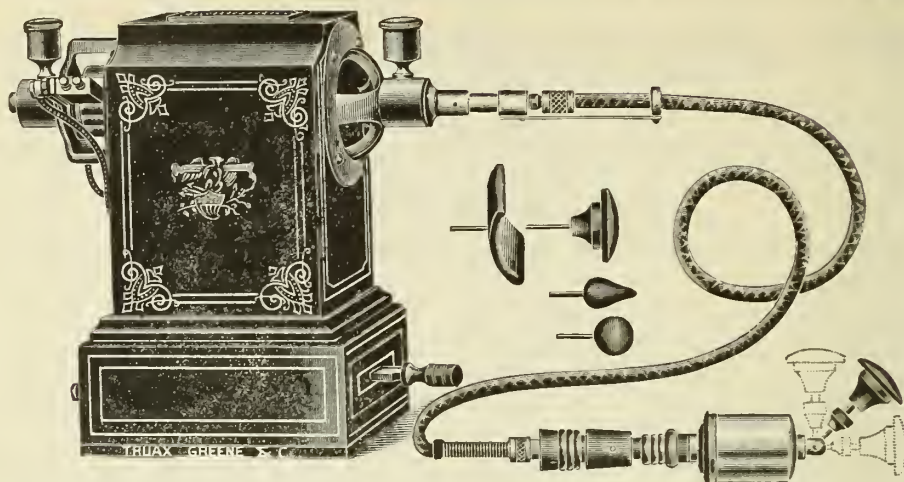
tism. In short, the value of salol in rheumatic conditions is so well understood and appreciated that further comment is unnecessary. The statements of Professors Hare and Guttman are so well known and to the point and have been verified so often, that we are not surprised that the wide-awake manufacturers placed "Antikamnia and Salol Tablets" on the market. Each of these tablets contains two and one-half grains of antikamnia and two and one-half grains of salol. The proper proportion of the ingredients is evidenced by the popularity of the tablets in all rheumatic conditions and particularly in that condition of muscular soreness which accompanies and follows the grip. The Antikamnia Chemical Company, St. Louis, Mo., will send samples to physicians on application. Please mention this journal.

Firewein (Tilden's) in Tuberculosis.

Much has been written in late years about sanitarium and climatic treatment for consumption and there can be no doubt of the efficacy of such treatment. Unfortunately the prevalence of tuberculosis is so widespread among the masses who are almost entirely dependent upon their own work or upon the meager income of the family for sustenance that unless the state steps in and provides free sanatoria in suitable locations it is useless to suggest this treatment for such sufferers. The toilers in our large cities affected with consumption cannot always leave their homes and shops to take up an outdoor life and unfamiliar outdoor work, much of which would be beyond their strength to perform.

While it is important to impress upon these sufferers the importance of fresh air, by day and by night, and to encourage hygienic reforms which will tend to increase the resistance of the system against the ravages of the disease and to prevent its spread to the healthy, it should not be forgotten that Tilden's Firwein is one of the most potent remedies for all forms of tuberculosis. The suggestion of Cavazzoni that iodine in tuberculosis acts not merely as a pulmonary antiseptic, but probably exerts an antitoxic action similar to that which, according to Brunozzi and Luccesini, it exerts in typhoid fever, goes a long way to explain the demonstrated efficacy of Firwein as a remedy for consumption. Besides iodine, Firwein (Tilden's) contains Bromine and Phosphorus held in solution by an elegant Wine of Fir, a product of the laboratories of The Tilden Company.

SAVE MONEY AND SECURE THE BEST MECHANICAL VIBRATION OR VIBRATORY STIMULATION.



Vibration is produced by heavy pressure. Stimulation is produced by light pressure. Vibratory Stimulation is a pressure midway between light and heavy.

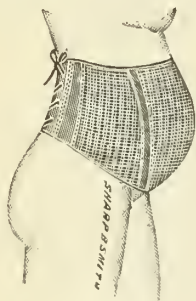
In selecting your Vibratory Apparatus, it is essential that it is so constructed as to permit of adjustment in length of stroke or degree of vibration. Any degree of vibration, length or form of stroke may be obtained by the use of the apparatus illustrated above. This apparatus is modeled after a pattern that has found favor at the hands of many prominent practitioners. Three forms of strokes or movements may be obtained by the use of this instrument. They are Rotation, Thrusting and Concussion. The Rotating movement is obtained with the tip or vibrator at an obtuse angle to the handle, and the Thrusting or Concussion move when this vibrator is at right angles to the handle. By proper adjustment of the eccentric head and tips or vibratodes, any degree of force or form of stroke may be obtained.

Write us for prices and full description.

TRUAX, GREENE & CO., 42, 44, 46 WABASH AVENUE CHICAGO

OUR SPECIALTIES

We Also Sharpen
Manicure Scissors,
Knives and Razors



BRACES FOR BOW LEGS, KNOCK-KNEES,
SPINAL CURVATURE AND FLAT FEET

ELASTIC STOCKINGS FOR VARICOSE
VEINS, SPRAINS and WEAK JOINTS

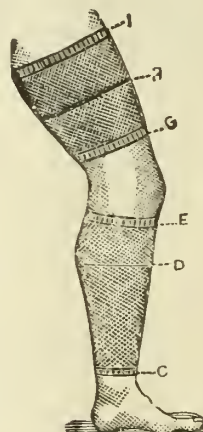
Abdominal
Supporters



TELEPHONE 2238
CENTRAL 4286

92 Wabash
...Avenue

Two Doors
North of
Washington
Street



SHARP & SMITH, CHICAGO

The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

Vol. V. No. 12. }
25c per copy

Springfield, Ill., May, 1904.

{ SUBSCRIPTION
{ \$3.00 A YEAR.

THE DURABILITY OF THE THERAPEUTIC EFFECTS OF HIGH FREQUENCY CURRENTS.

BY W. F. SOMERVILLE, M. A., B. SC., M. D.
GLASGOW, SCOTLAND.

Fellow of the Faculty of Physicians and Surgeons,
Glasgow. Member of the British Electro-Therapeutic
Society.

The treatment of various forms of diseased conditions of the body by means of electricity has for many years been employed by physicians as a curative agency, and we are all more or less acquainted with the ordinary forms of applying electricity, viz.: by the interrupted and continuous currents or by the static method. It is only however within recent years that physicians have learned to employ electrical currents of high frequency and potency, and the application of these high frequency currents is at present engaging much attention. While we are indebted to the careful observations of Elihu Thomson, Tesla and Hertz, it is to D'Arsonval the French biological physicist that we owe our present practical knowledge of the influence of these high frequency currents on the human body, and with a view to recognizing that he was the introducer of this form of electricity the application of the high frequency currents frequently goes by the name of "D'Arsonvalization."

It is perhaps unnecessary here to describe the apparatus since so many are acquainted with it, but I may mention that the current derived from the main first of all passes through a switchboard to which are attached a voltmeter and ammeter for the purpose of informing the operator of the amount of pressure and volume in use, and also of keeping under control the force of electricity. The current then passes through an interrupter of which various forms are in use, the object of which is to

break the current very rapidly. The electric current then is conveyed to the coil where the low voltage current is transformed by means of induction into one of high voltage. Thence the current is conducted to the high frequency apparatus composed of two condensers where the currents of high frequency and high potency are generated. These currents leap from one condenser to the other through the spark gap as it is called, oscillating from the one to the other with enormous rapidity and at the same time with opposite polarity. The force here, however, is too great for safe employment. Accordingly we deal in medicine only with the induced current that originates on the outer side of the condensers which oscillate in similar fashion to those that leap across the spark gap. These induced currents again are connected with the resonator where amplification of the electric waves occur. The current is afterwards brought to the condensation couch passing through in its course the meter which indicates the amount of milli-ampereage in use. The patient who lies on the couch holding the handles is in direct communication with one wire, while the other wire is connected with metallic plates underneath the couch. A well padded cushion separates the patient, who practically forms one side of the condenser, from the metallic plate which forms the other side, the patient accordingly becoming alternately the positive and negative side of the condenser. No sensation is experienced as the nervous system is unable to appreciate electrical vibrations that number millions per second.

The physiological effects of these high frequency currents is not yet fully understood, but from experience and observation it is recognized that among other results there occur a fall in the arterial tension, an increased action of the skin, an increase in the amplitude of respiration, an improvement in the nutritive processes of the body, and an in-

creased metabolism and elimination of urea and other waste products.

My experience of the use of the high frequency currents dates back from a period of only 19 months, and though like others, I have hesitancy in referring too strongly to the permanence of the benefits derived from the high frequency currents, owing to the brief time this form of treatment has been employed still, I venture to think that I am now in a position to give instances of a few cases that have undoubtedly benefited permanently from the use of these currents.

In November, 1902, I was consulted by a farmer weighing over 250 pounds who had been troubled with sciatica of the right lower limb for six months. The pain was constant and he was unable to lie, still less to turn in bed without suffering. Before treating a case of sciatica it is important to satisfy oneself that the pain is due to neuralgia of the nerve itself, and not to a perineuritis, where in addition to an affected nerve, adhesions of the nerve sheath have formed. In such cases the pain is chiefly or only felt on movement of the limb due to the dragging of the adhesions on the nerve. When such a condition is present neither high frequency nor any other form of electrical current will cure the patient. Operation is required; the nerve has to be stretched and the adhesions separated. Recognizing that in the case now referred to I had to deal simply with a neuralgia, I applied the high frequency currents and after eight visits the patient was cured. I was able to flex the thigh on the abdomen without pain and the man himself could adopt all attitudes capable of putting the nerve on the stretch without discomfort: in short, from being a comparative cripple he was dismissed in a condition quite fit for his work as a farmer. I saw this patient on March 1, 1904, about 15 months after treatment, when he told me that he had had no pain since he had been treated, although he had been exposed to hard work and all kinds of weather.

This good farmer has spread the fame of the high frequency currents in his country village and as a result a number of his friends have consulted me all of whom I am glad to

say for my credit's sake, have derived benefit. One of these was a mason of about 50 years of age who during many years had been liable to frequent and sudden attacks of lumbago. He came in November, 1903, suffering from an acute attack which he supposed was due to a "rack," as we call it in Scotland, or twist while lifting stones. With five applications all pain was removed and I saw him in the middle of the month of March, 1904, when he told me he had been perfectly free from all pain since he was treated four months previously.

Another case of sciatica with lumbar pain and stiffness at the knees occurring in a lady weighing 186 pounds, was treated by me in June, 1903. After a short course of treatment the pain over the sciatic nerve and gluteal region ceased, the knees became much less painful and she was able to go up and down stairs, to rise from her chair without pain, and to play golf during the Autumn months. I heard of her in February, 1904, eight months after treatment, and learned with satisfaction that she was very well and free from all sciatic pain.

I may refer to still another case of sciatica where the improvement promises to be permanent. The lady in question was suffering in the first instance from marked rheumatoid arthritis, a condition which in my experience does not yield to electricity, but in addition for many years had locomotion impeded on account of pain over the right sciatic nerve; she also had pain in the right shoulder. She was treated by me in January, 1903. At the end of February, 1904, she wrote me that she had experienced the best winter she had had for years, that since December she had had only two or three twinges and for the last few months the pain over the right shoulder which for a long period resisted the influence of the electric currents, had at last disappeared and had been entirely away for three months. From being a comparative cripple before treatment she is now "able to go up and down stairs twenty times a day without ever feeling any ill effects."

It has been generally found by those who employ high frequency currents that cases

of internal haemorrhoids yield to this form of electrical treatment. Not only is the condenser couch used but an electrode is passed into the rectum, a proceeding entirely unaccompanied by pain. I have dealt with many such cases and in almost all of them I have been successful. I will merely relate my experience with the first case that came under my care.

A gentleman about 40 years of age was sent to me in September, 1902, suffering from haemorrhoids which had troubled him more or less for 15 years. On the present occasion however he had had a sudden attack while making a long journey and arrived at his own house suffering great pain. The haemorrhoids had appeared externally and there was much local congestion and bleeding. The ordinary local measures were at first employed but when the patient was able to move he was sent to me for treatment by his doctor. After eight visits he had no more bleeding and no pain either when walking or at stool. The doctor who had sent him to me told me that on examining him after I had discontinued treatment, he was surprised to find that the piles had lost their velvety character and had become hardened and shrivelled. Five months later the doctor wrote me that he had again examined the patient and had found the haemorrhoids to have further contracted and to be still no source of trouble. I saw the patient myself in February of this year, 17 months after he had been treated, when I was gratified to learn that he had had no return of his haemorrhoids.

While referring to haemorrhoidal cases I may say that in varix of the legs marked improvement usually occurs with this form of treatment. It has usually been held that the high frequency currents have special influence on the vasomotor system and I have had reason from personal observation to believe this.

In September, 1902, I treated my first case of varicose veins. The patient was a lamp-lighter who had daily many miles to walk. The veins at that time were swollen and tense, and there was present a moist eczema with intolerable heat and irritation. A some-

what prolonged course of treatment was required but at the termination of the course the heat, irritation and pain had disappeared and though the veins were of course still large they were by no means so tense as they had been at first. I saw this man in the middle of March, active in his work, and he declared himself "first rate."

In the same month my second case of varix of the legs presented itself in the person of a very stout lady of about 46 years of age. Before treatment she was unable to walk or even to stand without great discomfort which also continued during the night and prevented sleep. After several visits she was able to move about with ease and even to climb stairs without complaint.

The beneficial effects on her generally can be well understood, for free locomotion during the day and undisturbed nights gave rise to an improved state of her general health. She was one of the patients, too, who suffered from haemorrhoids and the improvement in the varicose conditions both of limbs and of bowels was equally marked. I saw this same lady in October, 1903, thirteen months after she was first treated. She was then suffering from an acute attack of rheumatic neuralgia of the shoulder. A short course of high frequency treatment speedily removed the pain and I was gratified to learn from her then that since she was first treated neither the varix of the legs nor of the haemorrhoidal vessels had given her any trouble.

It has been found by some that high frequency currents have a curative effect on skin diseases, such as eczema, psoriasis, etc. A very marked case of the latter came to me in November, 1902. The disease was widespread, but was especially in evidence over the lumbar and gluteal regions and the lower limbs. The patient, a lady of about 55 years of age, had in addition polyuria, 150 ounces of urine without any trace of albumen or sugar being passed daily, and besides she suffered from great insomnia, possibly due to the skin irritation, and general nervousness. She was almost entirely confined to bed, the distribution of the skin eruption preventing her from walking or sitting with any comfort. The disease yielded in a most remark-

able fashion. Very shortly after commencing treatment the scales began to be shed, and clear skin to appear through the patches, till finally, after about twenty-four visits, the eruption had almost entirely disappeared from the legs, and the large patches over the hips had greatly cleared up. Further, the quantity of urine voided fell to about 50 ounces in twenty-four hours; the insomnia gave way to great desire for sleep, so that the patient not only slept continuously for hours during the night, but was disposed to be somewhat sleepy during the day; the general irritability also greatly lessened, and she became much more cheerful in manner. Locomotion was so much improved that she was able to walk with ease and the improvement in her general health was very noticeable. Unfortunately she was suffering at the time from malignant disease which eventually caused her death several months afterwards, but the eruption never recurred. I am quite aware that psoriasis not uncommonly disappears spontaneously, yet in this case, though the eruption had been continuously present for several years, it began to disappear so markedly immediately on the commencement of the treatment, that it is impossible to avoid the conclusion that the benefit was due to the high frequency currents.

In cases of lupus erythematosus discoides, in aene of the face, and in eczema punctata affecting the whole body I have likewise had delightful and permanent results.

As we are all aware, asthma has many causes and manifestations. I have had for many years while in general practice under my care, a clergyman who was very frequently and particularly after preaching, troubled with an attack of asthma. In the early morning, this has necessitated his sitting up in bed to breathe and to cough. Treatment by the ordinary methods failed to give relief except when he was able to take a holiday, when the asthma never annoyed him. Recognizing that his attacks were neurotic in origin, I suggested to him as soon as I became possessed of the high frequency apparatus, to submit himself to the currents. This was in September, 1902. Very speedily the asthma ceased to trouble him, and except during

an attack of influenza when his nervous system was depressed, he has hardly ever been troubled with his old complaint. By way of precaution I may add however, that on Sunday nights, after a hard day's work, I occasionally give him a sitting with the result that he goes home at 9 P. M. freshened up, hungry for his supper, and that afterwards he sleeps, as he says, "like a top the whole night through."

Peripheral neuritis is another nervous affection which yields happily to the high frequency currents. A married lady came to me at the end of April, 1903, suffering from facial paralysis, ptosis, giddiness, headaches, loss of sensation in different parts of the body, chiefly in the lower extremities and the right thumb. She was able to walk only with difficulty, was depressed in spirits and unable to attend to her duties at home. She made rapid progress under treatment and in March of this year when I last saw her, she declared she was quite well. All the old unpleasant symptoms were absent and she was thoroughly fitted for all her home duties.

From personal experience in dealing with a number of cases suffering from headache of nervous origin, I am now in a position to give a hopeful prognosis. A married lady of over thirty consulted me in June, 1903, complaining of headaches which had troubled her more or less since she was a girl, but especially during the last 14 months. A restful night's sleep had been denied her for a long time. In little more than three weeks after treatment was commenced the headaches had entirely ceased: she slept ten hours on a stretch at night and though she has come through a pregnancy and has had occasion to nurse sick children at home, she is still quite well, sleeping soundly and continuing free from headaches.

A pleasing feature of the beneficial results of the high frequency currents experienced in cases of insomnia when sleeplessness is one of several symptoms complained of is that it almost invariably yields to electrical treatment, but one case I may specially notice of a young lady who was in good health except that she had been troubled with insomnia for several years. She had in all forty-two treat-

ments; improvement was gradual but undoubted, and now I learn that sleep and she are good friends and that as a result she is enabled thoroughly to enjoy life.

I was greatly struck with the immediate, and so far as I can judge, permanent benefit derived from the introduction of the rectal electrode in two cases of fissure of the anus. One of them had suffered pain on defecation for two years but was relieved after a very few doses and remained cured till his death three months afterwards from heart disease.

The other was a gentleman who came to me at the very commencement of January of this year. He had been a sufferer from fissure for many years and during the last 18 months had suffered acutely at every action of the bowels. After two doses he had a normal evacuation without any pain. He had in all eight sittings and since treatment was discontinued he has been quite well.

Even in obstinate constipation the high frequency currents give rise to most satisfactory results.

A healthy young gentleman of 25 came to me at the commencement of December, 1903, suffering from constipation which required daily dosage. From the first day of treatment purgative medicine was stopped, as the sponge electrode applied to the surface of the abdomen caused a natural evacuation and I dismissed him after sixteen sittings. He has not required to resort again to any medicinal assistance.

It will be seen from the foregoing cases that while sufficient lapse of time has not occurred to permit of reference to them with certainty as being cured, still they demonstrate that so far as the present time will permit, the high frequency currents have produced permanent results.

A CONTRIBUTION TO THE DIAGNOSIS AND TREATMENT OF THE SURGICAL DISEASES OF THE URETER AND KIDNEYS.*

BY F. KREISSL, M. D., CHICAGO.

Professor of Genito-Urinary Surgery, Chicago Clinical School; Attending Surgeon, Cook County Hospital, Chicago, Ill.

1. *Hematuria. Nephrotomy. Recovery.*—Patient, forty-five years old, gave the follow-

*Read at 53d Annual Meeting, Chicago, May 30, 1903

ing history: Had pleurisy, pronounced as tuberculosis, in 1895. In 1896, ascites, which yielded to internal medication. Malarial fever, recurring in intervals, from 1883 to 1892. In March, 1902, hematuria, accompanied with tenesmus at times. Rest in bed for several days reduced the quantity of blood materially, sometimes so much that the urine, macroscopically at least, seemed to be almost clear, but the hematuria returned very soon after the patient was up and around for a few hours.

Examination, October 10, 1902.

Inguinal glands and external genitals apparently normal. So is the prostate, and the seminal vesicles, which are outlined without difficulty, the patient being thin and emaciated. No tenderness over both ureters and kidneys. The left kidney distinctly larger and more resistant than the right one. Heart and lungs normal. No family history of consumption or malignant growth, nor of a preceding lues, or a trauma. The urethral wall, seen through the urethroscope, appears normal. So is the bladder, inspected through the cystoscope. From the right ureter, clear urine is secreted, while bloody urine is emitted from the left side. Ureter catheter, No. 8, French scale, is passed without difficulty into the renal pelvis, and from there the bloody urine collected for examination. The same procedure on the right kidney furnishes clear urine. The next to do, was to find the origin of the hematuria, of which, excluding a gumma of the kidney, and the still hypothetical essential hematuria, there remained as the more common probable cause tuberculosis, stone, malignant growth, or nephritis.

The result of the examination of both urines by the Columbus Laboratory is given here:

Urine from Right Kidney.—Clear, amber color, very little mucin, stained slides negative, few leucocytes, few epithelial cells. Urea, one per cent. Freezing point, 1.8° C.

Urine from Left Kidney.—Cloudy, reddish color, albumin present, stained slides show leucocytes, epithelium, few single cocci; tubercle bacilli absent. Blood present, five-tenths per cent. Pus absent, numerous

epithelial cells. Urea, 1.1 per cent. Freezing point, 1.6° C.

In the skiagraph taken, the following day, you will notice a shadow, the density and position of which might permit the diagnosis of a calculus of the ureter caught at its third narrowing in the bladder wall, but closer study of the comparative proportions of this pelvis will make it evident that the shadow is not a ureter calculus. The distance of each ureter from the median line is less than one inch. If in this case this distinct shadow was a ureter stone, it ought to be about midway between the median line and where it appears on the picture. A second exposure, made four days afterwards, showed the same condition. Inasmuch as I had no difficulty in passing a ureter catheter up the ureter, and obtained the bloody urine direct from the renal pelvis, I thought myself justified in eliminating the existence of a stone in the vesical portion of the ureter, or its possible bearing on the hematuria.

To get to the cause of the latter, I made a lumbar incision, October 15th, and found a very large, congested, cyanotic kidney, but macroscopically nothing pathologic on its surface, nor on the cut surface of the parenchyma, in the calices or the renal pelvis. A good-sized elastic bougie was easily passed down the ureter into the bladder without encountering an obstruction. The urine was closely inspected for three weeks following the operation, but no concrement found, neither could a stone be seen in a subsequent cystoscopic inspection of the bladder cavity.

Patient is gaining in weight since he left the hospital. The urine cleared up in the second week after the nephrotomy, and has remained free from albumin and blood, both macroscopically and microscopically. If one had relied upon the X-Ray picture alone, the result would have been at least an unnecessary searching for the calculus through a supra-pubic opening, and an incision in the vesical end of the ureter. But aside of this X-Ray fallacy, and its possible consequences, there is another point of interest attached to the case and its present termination. It brings up again the question, is there such a condition as "essential hematuria," or are

all hemorrhages from the kidney symptomatic, as most of the writers believe?

In analyzing the many reports on essential hematuria, especially those in which an anatomical examination followed the clinical observations, there were hardly any found in which the upper urinary tract was normal. In most of them, nephritic lesions existed, sometimes so small that they were not considered as the cause of the hematuria. It is also of interest to know that in a proportion of cases of nephritis, complicated with hematuria, the urine examination gave a negative result, while a subsequent anatomical investigation of the extirpated kidney proved the presence of this pathological condition. Not less significant is the fact that hematuria is, in a number of cases, the only early symptom of renal disease, preceding all others sometimes for years.

When, in this case, all methods of examination before and during the operation have failed to demonstrate a palpable pathological condition, such as tuberculosis, new growth, stone or nephritis, in an advanced stage, I do not deny the possibility of the manifestations of either of them in the future, though the small amount of albumin in the urine and the cyanotic and congested condition of the parenchyma might point to an early stage of nephritis. If it be so, the present termination of the case corroborates the importance of nephrotomy in certain cases of this kind.

2. *Ureteral Calculus of an Unusual Size.*
—The second skiagraph is taken from a patient, thirty-one years old, whom I saw, November 20, 1892.

He gave a history of gonorrhea, complicated by prostatitis, cystitis and epididymitis ten years ago. Three years later, dull pain in the left iliac region, at times increasing to real paroxysms, lasting for several hours. The first urine after such attacks contained large quantities of pus, while the urine voided in the free intervals was apparently clear. Tenesmus and frequent urination were and are present most of the time. He was operated for stricture, without being benefited, some time ago; local treatment of the

bladder also failed to relieve him. I found, upon renal palpation, a large atonic prostate, and high up, to the left side, a hard mass, corresponding in size with the dense shadow seen in the skiagraph. Through the urethroscopic tube some pus was noticed emanating from the left seminal duct. Cystoscopically, the bladder wall seems of normal appearance, with the exception of a narrow strip of a hyperemic area, extending from the vesical sphincter through the trigone to the left ureter. A ureter catheter introduced into the latter was arrested at a distance of one inch and a quarter from its vesical opening. The obstruction is caused by the calculus, as it appears in the skiagraph. Its diameters are one and one-eighth by seven-eighths inches. Unusual is the origin of the stone. It is a true ureter stone, presumably produced by an ascending gonorrheal or mixed infection, as the direction of the hyperemic zone in the trigone would indicate. Unusual is also its size, and it is remarkable to what extent the ureter may be distended, whose canal in this locality has a diameter of but four millimeters. It is further of interest that outside of the attacks of colic the urine is draining in a good stream alongside such an obstruction, as I could observe through the cystoscope, on the distinct typical jets emitted in frequent intervals.

The peculiar location of the stone renders the operation rather difficult. The perineal route is, for good reasons, not very favorably thought of. The ilioinguinal incision, the extra-peritoneal route, does not give much space to work so deep in the pelvis, and the trans-peritoneal method is not without danger, more so on account of a possible infection than the remote chance of urine leakage. I propose, after removing the stone in this way, to leave a ureter catheter *a demeure* in the renal pelvis, close, as far as the thin and disintegrated wall should permit, the ureter by Lembert sutures, and unite the parietal peritoneum over it, leaving a drain in the cavity, for a few days, meanwhile draining all the urine from the left kidney, until the wound in the peritoneum is firmly closed.

operation; as he informed me, some time ago, he is trying to dissolve the stone by a certain mineral water, but promised to return if the water fails.

3. *Renal Tuberculosis*.—In February, 1902, I was consulted by a patient, forty years old, who gave a history of repeated attacks of gonorrhea within the past fifteen years. His present complaints, extending over a period of two years, were: Frequent and urgent calls to urinate, sometimes every fifteen minutes, never less than six times at night, post-mictural pain, and for the last four months painful swelling of the left testicle, its size varying, corresponding with the exacerbations and remissions in the vesical symptoms. The left epididymis, the prostate and the left seminal vesicle were enlarged, indurated and extremely sensitive to slight palpation. The fluid from both vesicles obtained by massage, in large quantities, contained pus, gonococcus and staphylococcus, numerous dead spermatozoa. Cystoscopically, chronic gonorrheal cystitis, localized in the trigone, is diagnosed. Ureteroscopically, urethritis posterior granulosa. A bacteriological examination of the urine and cultures, with its sediment, made in the Columbus Laboratory, corroborated the diagnosis, and was negative as to the possible co-existence of tuberculosis, of which one had to think, considering some of the local symptoms and the chronicity of the process. The patient improved rapidly under appropriate treatment, and was practically well, both subjectively and objectively, in May. The urine examined at that time was normal, and remained so when I saw the patient on and off in June and July. He returned in October with a slight relapse of tenesmus and cloudy urine, which, in spite of local treatment, remained unchanged until December 22d, when he complained of chills, and pain in the left lumbar region. I made a cystoscopic examination, and found pronounced trigone cystitis, the hyperemic area extending to and surrounding both ureteral openings. The right ureter seemed to discharge clear urine, but the secretion from the left one was considerably cloudy.

So far the patient is not ready for any

Passing a ureter catheter into the left

renal pelvis, a half an ounce of very cloudy urine was expelled, apparently under much pressure, and this was followed by nearly eight cubic centimeters of thick creamy pus. The catheterizing of the right renal pelvis furnished a nearly clear urine. Both were examined in the Columbus Laboratory, the report on which follows here:

Right Kidney.—Leucocytes few. Pus absent. Epithelial cells present, spindle, squamous. Stained specimens show: Cocci and bacilli moderate. These are not characteristic enough to be specified.

Left Kidney.—Blood cells few. Leucocytes present, more than one hundred to high p. field. Epithelial cells few. Stained specimens show: Many tubercle bacilli present; a few single cocci present.

Here is one of these cases in which it is impossible to trace positively the source of the infection with tuberculosis. It is impossible to state with certainty that it was present before, or when I saw the patient first, because there was no evidence found, notwithstanding my investigation in this direction. As another reason, I could also add that all the symptoms disappeared under a treatment directed only against the gonorrhea and its complications, which had hardly been the case when there was an ascending or descending tuberculosis present at the time. Neither could I positively say that in this case the gonorrhea acted as a trauma in provoking a latent tuberculosis in the upper urinary tract, because the gonorrhea was cured for quite awhile before the former made its manifestations. There is no history of tuberculosis in the patient's family. He himself is a robust man, weighing over two hundred pounds. Yet there is a remote possibility that in some way or other the kidney became infected, perhaps, long before I saw the patient, but it had not reached that stage in which local symptoms would point to the existence and the seat of the disease, or would interfere with a successful treatment of the gonorrheal process. Considering the suspicious condition of the right kidney, nephrectomy in this case is out of the question.

Permit me to add a few words regarding

the treatment employed in this case. After emptying both renal pelvis and irrigating with an oxycyanide of mercury solution through the ureter catheter, I injected gomenol and while withdrawing the catheter deposited some of it in the ureters and bladder.

Besides these applications, I injected the oil hypodermatically, after noticing a marked decrease in the number of bacilli within two weeks. Gomenol is a vegetable antiseptic; it is the result of the distillation of the leaves of the "*Maleleuca Viridiflora*," a tree growing abundantly in certain portions of New Caledonia.*

It is neither toxic nor caustic. The drug is eliminated principally through the air passages and kidneys, and, therefore, it is naturally employed in diseases of the lungs, and of the genito-urinary organs. It has been used to great advantage in France in the last year or so, and the results obtained are very favorable.

Under this treatment the patients' condition improved considerably. The report on the urine from each kidney, obtained January 21, and again March 15th, reads as follows:

Urine from left kidney, very few pus cells, and about a half a dozen tubercle bacilli to the slide.

Urine from right kidney, apparently normal.

It would be premature to form definite conclusions from the few cases of renal and vesical tuberculosis in which I have employed the drug. Without pretending gomenol to be a specific for tuberculosis of the urinary tract, I believe that it is a remedy capable of effecting very good results in dealing with bacterial infections therein.

4. *Pyelo-Nephritis in a Prolapsed Kidney.*—Mrs. O., age thirty-one years, widow, was taken sick with chills; temperature 104°; nausea and tenesmus, January 16th. I saw her in consultation with Dr. Campbell, of Chicago, the next day. She gave the following history: Father died from consumption when she was four years old; one brother died from lung trouble; mother, fifty-nine

*It is a natural terpinol, remarkably rich in antiseptic constituents and containing very few aldehydes; for this reason it is particularly well adapted for therapeutic use. (M. Bertrand's analysis.)

years old, in good health. Patient was never robust, but free from sickness until a year after her marriage, in 1893. She had then leucorrhea, pain in bladder and tenesmus, which was traceable to a gonorrheal infection of the husband. She never was pregnant. In 1899, pyosalpinx on the right side necessitated removal of the Fallopian tube and ovary. Since then the bladder symptoms were less pronounced, until the severe attack on January 16th occurred. Very little urine, I believe not more than twenty ounces, was passed in the preceding twenty-four hours. The right kidney was palpable as a dense tumor in the right mesogastrium. Cystoscopic examination demonstrated chronic cystitis of the trigone and the fundus. A catheter passed into the right ureter was arrested, seven inches from the vesical orifice, the obstruction corresponding with the location of the tumor. Pushing the catheter up a little higher, cloudy urine commenced to flow pretty rapidly, as if being under a high pressure. This urine was examined, and here is the report: Albumin, 1.7 per cent; pus, 0.2 per cent; pus coccus present; also an overgrowth of large bacilli in chains. Catheterizing of the left ureter furnished clear and normal urine.

The temperature dropped to 100° following the evacuation of the renal pelvis. The diagnosis was prolapsed kidney, kinked ureter, renal retention; pyelo-nephritis, perhaps of tuberculous character.

January 22. Making a lumbar incision, I found the lower third of the prolapsed kidney and the upper part of the ureter firmly attached to the parietal peritoneum. After severing the adhesions, and bringing the very large and congested kidney to the surface, the latter showed quite a number of protrusions, each one of them consisting of several miliary abscesses; the cut surface of the parenchyma had the same appearance. Considering the history of the case, the character of the lesions, and the good condition of the left kidney, I decided on nephrectomy.

The patient made an uneventful recovery. Temperature fell to normal the following day. The amount of urine secreted from the left kidney increased to fifty-five ounces after

two days, and has remained so since. The wound closed February 5th. The remaining cystitis yielded to local treatment within six weeks after the operation.

Here is the specimen and the laboratory report on the latter:

CHICAGO, Jan. 26, 1903.

Dr. F. Kreissl, Stewart Bldg.:

DEAR DOCTOR:—The kidney shows pyelonephritis. The organ is somewhat enlarged. Color does not show on account of formalin. There are multiple abscesses located both in the pyramids and in the cortex. Microscopically we find miliary abscesses. These do not show giant cells, proliferation of fibrous tissue, nor much necrosis. They do show cellular infiltration. Other than this there is a mild early general sclerosis. Some of the Malpighian tufts are entirely sclerosed. This is exceptional. In localities other than those of abscess, the tubular epithelium is in good shape.

Very truly yours,
COLUMBUS MEDICAL LABORATORY.

In reviewing these cases, it is evident that no single method of examination in this particular field of surgery can always be relied upon implicitly in making a diagnosis, and deciding upon further steps. The value of cystoscopy and ureteral catheterization for both purposes should not be under-estimated. Both procedures are indispensable for the diagnosis of renal and ureteral diseases, for the exact localization of the lesions, and for information concerning the functional capacity of both kidneys. The conservative surgeon will successfully employ the ureteral catheter for topical applications in the renal pelvis in a small number of cases of so-called surgical kidney. The reports of cases of "essential hematuria" should be accepted with the proverbial grain of salt. Hematuria is a symptom of some pathological lesion in the upper urinary ways, which may not always have advanced so far as to be macroscopically visible, even after exposing the parenchyma.

Inasmuch as most of the renal disorders produce or are associated with renal congestion and intracapsular tension, and inasmuch as most of the symptoms of these disorders can be traced to the engorgement of the kidney, the conclusion is justified that timely relief of the latter by decapsulation, or by nephrotomy, should be the radical and effective procedure, if conservative means fail within a reasonable time. The results ob-

tained within the last few years are certainly encouraging enough to stimulate further work along these lines.

1006 Stewart Building.

TREATMENT OF THE SUPPURATIVE DISEASES OF THE ACCESSORY SINUSES OF THE NOSE.*

BY E. FLETCHER INGALS, M. D., CHICAGO.

SUPPURATION OF THE ANTRUM.

Treatment—In acute cases the patient should be kept quiet, the pain relieved by hot or cold compresses over the cheek and the swelling and turgescence relieved by local applications in the region of the ostium maxillare. Most satisfactory for this purpose is a spray containing gr. ii of cocain, gr. 1-10 of suprarenalin, and gr. viii of boric acid to the ounce of water. This should be used (preferably warm) every two or three hours. By reducing the swelling about the ostium the pus may escape through the natural orifice. When this is not sufficient, recent cases may occasionally be cured by washing out the antrum through the natural opening with detergent solutions or with hydrogen peroxid and weak solutions of permanganate of potash gr. $\frac{1}{4}$ ad. $\frac{5}{16}$ i normal salt solution or a saturated solution of boric acid followed by the silver salts; but usually free drainage must be established. For washing out the antrum through the natural opening a silver canula about 2 m. m. in its extreme diameter at the end and 10 c. m. long that can be attached to a small syringe will be needed. By running a soft copper wire through the canula it may be bent as desired. The natural opening may be enlarged by a trochar or burr, hypertrophied mucous membrane or granulation tissue in the hiatus semilunaris must be removed. To accomplish this it is usually necessary to resect the anterior end of the middle turbinated body which may be done with curved scissors or cutting forceps. This procedure is quite necessary if the empyema of the antrum is associated with suppuration, of the anterior ethmoid cells or frontal

sinus as is often the case; otherwise the antrum would constantly be reinfected.

Hunter's method of opening the antrum through the socket of one of the molars or bicuspsids is still considered one of the best, the principal objection urged against it being the annoyance caused the patient by the offensive discharge into the mouth and the possibility that particles of food may escape into the antrum.

In chronic cases Christopher Heath recommended entering the antrum above the alveolus through the canine fossa; the tendency to closure being obviated by making an opening a centimetre or more in diameter. Such an opening offers an opportunity for curetting the antrum, which is necessary in some conditions. The antrum may be opened from the naris through the inferior meatus by means of trephine, burr, drill, knife, or long curved strong trocar as recommended by Krause. The latter position obviates the objection to Hunter's method, but the opening is less easy of access, and is more difficult to maintain until healing has occurred. When this point is selected for the opening it is usually necessary to remove the anterior end of the inferior turbinated body. This method is objectionable when atrophic rhinitis exists or when there is associated suppuration of the frontal sinus or ethmoid cells. In performing this operation, Krause's trochar is an excellent instrument for breaking through the lateral wall of the antrum. The opening thus formed may be enlarged and the ragged edge of the mucous membrane cut away by cutting forceps, sharp spoon or curette. If the opening is made large enough the cavity may be easily packed through a bent tube similar to Wood's uterine gauze packer or it may be readily washed, even by the patient, through an Eustachian catheter or other bent tube. This operation obviates the objections to an opening into the mouth. In acute cases prompt relief from the pain and speedy cure may sometimes be obtained by a temporary small opening through the canine fossa: a procedure specially indicated where the teeth were all sound. The preferable instrument for this temporary opening is a diamond point drill-trephine 5 m. m. in diameter,

*Read before the joint meeting of the Chicago Medical and the Chicago Laryngological and Climatological Societies March 9, 1904.

driven by an electric or hand motor. The diamond point drill prevents slipping which is very apt to occur when an ordinary trephine is used. It is a waste of time, however, to attempt to treat the disease by any method while diseased roots of teeth project into the floor of the antrum. The preference in the majority of cases is for Hunter's method, the last bicuspid or the first or second molar being removed or the opening made through a space left by a tooth which has been already lost. Various forms of trephines, drills and dental burrs have been used for making the opening, but in most instances too small an instrument is employed. I use either Brainard's conical bone drill which makes an opening 6 m. m. in diameter; or better still a diamond point drill-trephine of the same size which makes a cleaner wound and which when used with a good motor shortens the operation very much. Profound anaesthesia is not usually necessary. A weak solution of cocain such as used in anaesthetizing the nares may be injected into the gum in three or four places and if this is not sufficient the patient may inhale chloroform from a wide mouthed bottle until nearly unconscious when the operation can be done painlessly. In nervous patients a general anaesthetic may be needed. Nitrous oxide gas or chloride or bromide of ethyl will answer the purpose. I have recently used the chloride of ethyl in several cases with much satisfaction and now prefer it to other local or general anaesthetics for these operations. Hemorrhage may be checked by tamponing. The opening having been made, the antrum should be washed out and a gold or rubber tube introduced to maintain its patency. If this precaution is neglected, the opening is likely to close before the disease has been cured. Any good dentist can make a suitable gold tube which can be fastened with clamps to the adjoining teeth. I use by preference rubber tubes nearly six millimetres diameter, nineteen to thirty-five millimetres in length, and with a calibre of four millimetres with flanges at each end. With a wire, the end of which has been bent to a right angle, the distance through the alveolus may be measured and a tube of proper length

selected. The flange at the upper end of the tube is thinned by cutting away its upper surface, until it may be squeezed into a gelatin capsule of proper size. This is then oiled and readily passed through the opening into the antrum. A probe is then passed through the tube, and the gelatin capsule perforated or forced off when the flange opens out, and the tube is secured. These tubes are inexpensive and are very much more comfortable to the patient than gold. Instead of using a tube some surgeons prefer closing the opening with a solid plug which is fastened to the teeth or to a plate, an apparatus that can be best supplied by a dentist. The subsequent treatment consists of keeping the cavity clean by washing it out with watery solutions of hydrogen peroxide 50% strong or boric acid a saturated solution or simply with sterilized water; and stimulating healing by injections once a day of a 5% solution of protargol of a 20% solution of argyrol; or by a one to 5% solution of zinc sulphate or chloride or one to 2% solution of copper sulphate. Powdered boric acid, iodol, iodoform or aristol may be used advantageously by insufflation and sometimes the patient will obtain much relief by spraying the cavity with mild solutions of carbolic acid, oil of cloves, oil of cinnamon, or terebene in oleum petrolata alba, but oily solutions can not be used when a rubber drainage tube is employed as they quickly soften the tube and cause it to swell. The patient should stop the opening in the tube with a pledget of cotton while eating. This treatment may be given a thorough trial but if it does not succeed within three or four months, the advantages of a radical operation through the canine fossa should be urged upon the patient, for it is probable that delayed healing is due to alterations in the lining membrane or to polypoid tissue, or dead bone, or to septa which prevent complete drainage; any of which conditions demand curettement of the cavity. In this condition, Christopher Heath's operation or some similar procedure becomes necessary and a radical operation should be performed.

The radical operation consists of opening through the canine fossa and curetting thor-

oughly the lining of the antrum, removing at the same time any dead bone or obstructing septa. The operation is performed with various modifications in the incision and technique by different surgeons. This operation should be done under general anaesthesia and it will be found most convenient if the chloroform is administered by Brophy's inhaler or some similar apparatus which allows it to enter the mouth through a tube so that the surgeon's view will not be interfered with. The mouth should be kept open by a gag inserted between the teeth of the opposite side. Numerous sponges for swabbing out the throat should be on hand and several long strips of narrow gauze for packing. The hanging head position will be found favorable in order to prevent blood running into the throat. A thick pad of gauze or sponge introduced between the cheek and the posterior teeth will also help greatly in this respect.

Caldwell-Luc to render the stitching easier make the incision about 5 m.m. below the buccal fold between the alveolus and the cheek and extend it from the first molar tooth forward to the canine ridge; they then raise the periosteum and soft parts together, and make an opening through the anterior wall of the antrum large enough to admit the finger and extending to the nasal wall. After curetting the cavity and swabbing it out with a 1 to 10 or 1 to 5 chloride of zinc solution they pack it temporarily with iodoform gauze to arrest bleeding. The nasal cavity of the same side is then filled with gauze in order to avoid injuring the septum. The packing is then removed from the antrum and a large opening is made through the nasal wall into the inferior meatus either with chisels or with electric burr. The anterior end of the inferior turbinated bone is cut off at the same time. The antrum is again packed from the mouth and the end of the dressing brought into the nose; the incision in the mouth is then closed by catgut sutures. The wound generally closes by the 4th day; the packing is removed from the antrum through the nose on the 4th or 5th day and if pus is still secreted the cavity is washed out frequently through a curved canula for 5 or

6 weeks. The advantages claimed for this operation are that it allows immediate closure of the wound in the mouth and prevents reinfection of the cavity from that source; at the same time it is found rather pleasanter for many patients.

Nicholas Senn adopts a similar operation but makes an osteoplastic flap by a U-shaped incision made with a knife through the soft parts and with a chisel through the bone, the anterior part of which falls just behind the root of the canine tooth. The horizontal part is just above the alveolus on a level with the floor of the antrum and the posterior vertical part is about 18 m. m. back of the first. This flap is fractured by inserting an elevator into the antrum through the transverse cut and using it as a lever. The flap composed of mucous membrane, periosteum and bone is turned up and through the opening the cavity is carefully cleared of foreign bodies, sequestra, fungous granulations or polypi by a sharp spoon. With curved forceps an opening is made from the antrum through the nasal wall into the inferior meatus and a drainage tube is passed from the mouth through the antrum into the naris, the two ends being fastened together with a strong silk thread. A small semicircular defect is made in the margin of the bony flap to furnish space for the drainage tube. The flap is then replaced and sutured with catgut sutures through the mucous membrane and periosteum only. The cavity is washed daily with a boric acid or other antiseptic solution and when suppuration ceases the thread is cut and the rubber tube drawn from the nostril back into the antrum. The nasal drainage is continued for some time longer until a permanent opening is established, and then the tube is dispensed with. The irrigation is continued for several weeks.

A. Logan Turner makes an incision down to the bone and carries it back to the molar process of the superior maxilla. The soft parts including the periosteum are then raised and the bone forming the anterior wall of the antrum or the canine fossa is cut away by chisel and mallet, or a trephine or perfor-

ator; the opening being enlarged to satisfactory dimensions by means of a bone punch forceps or burrs. In doing the operation care should be taken not to injure the infraorbital nerve or artery. The opening is generally made large enough to admit the little finger. Hemorrhage is controlled by packing with gauze and after careful inspection under good light, the walls of the sinus are curetted until all diseased tissue has been removed. It is especially important in curetting the roof of the cavity not to injure the infraorbital nerve, and also that all angles and recesses be cleared of all diseased tissue. Finally the antrum is dried by gauze, is swabbed with pure carbolic acid and lightly packed with iodoform gauze, the end of the dressing being allowed to project through the opening in the mucous membrane into the mouth. A pad of gauze saturated with boric acid solution is placed between the upper lip and alveolus to cover the wound and should be changed three or four times daily to prevent reinfection; the wound each time being syringed with a solution of boric acid and the mouth carefully washed out. The patient is given a liquid diet only at this time. The packing is not taken out until the 5th or 6th day unless the temperature or the appearance of the wound should indicate its earlier removal. At this time the cavity is repacked and subsequently redressed every 3d or 4th day the packing being finally removed by the end of the 2d or 3d week when granulations line the cavity. The wound through the mucous membrane may be partially closed by one or more stitches either immediately after the operation or after the second dressing. Turner does not make a counter opening into the nose, and if drainage had previously been provided through the alveolus, he either allows the opening to close before the radical operation, or keeps it plugged for several days afterward. Whatever operation is adopted in very chronic cases, the healing process may require months or even years.

SUPPURATION OF THE ETHMOIDAL CELLS.

Treatment—Some cases recover spontaneously, but most of them continue for many

months, and even years unless thoroughly treated. In acute cases, relief may frequently be obtained by local medication that will reduce the swelling and thus allow the pent up secretions to escape. For this purpose nothing is better than a spray containing cocaine hydrochlorate gr. ii, suprarenalin gr. 1-10, boric acid gr. viii to the ounce of water. It should be thoroughly applied several times daily. In chronic cases the indications are to remove all obstructions and provide for free drainage and to keep the parts cleansed and as nearly aseptic as possible. In order to obtain free access to the ethmoidal cells it is necessary to remove a part or all of the middle turbinated body; this may be easily done with curved scissors designed for the purpose, (Ingals' ethmoid scissors), or with these and the ordinary nasal snare. If disease of the antrum co-exists, it also must be remedied before we can hope to effect a cure. Polypoid growths or fungous granulation may be best removed by snare and sharp spoon, or small masses may be touched with the galvanocautery or with monochloroacetic acid. Dead bone must be searched out with a probe and carefully scraped away, and with the sharp spoon or cutting forceps the partitions of the ethmoid cells must be broken down to give free exit to the pus; but care must be taken not to excite undue inflammation, which might extend to the brain. These operations may all be done under cocaine but it is generally necessary to have repeated sittings. It is so difficult to see the parts well when the patient is under a general anaesthetic that the advantages are greatly in favor of local anaesthesia supplemented in some instances by chloride of ethyl during the more painful parts of the operation. Free applications of suprarenalin will greatly facilitate the work. In some quite extensive operations, a thorough application of a strong solution of suprarenalin may so prevent bleeding as to allow the operator to see what is being done, but this is only when it can be injected into each of the cells to be attacked. After the operation the naris may be temporarily packed with gauze or lint to prevent bleeding. The

cure will be hastened by injecting into the ethmoid cells, with a long, slender silver canula attached to a hypodermic syringe, a 50% solution of hydrogen peroxid followed by a saturated solution of boric acid for cleansing, and subsequently by a 4% solution of protargol or a 15% solution of argyrol. This should be repeated every second or third day. The patient should cleanse the nasal cavity once or twice daily with a detergent solution, and may use two or three times daily an oily spray of Thymol gr. ss, Ol. Caryophylli v, Ol. Petrol. Alb. ad 3 i, the strength being slightly increased or diminished according to its effects. It should not cause smarting for more than five minutes. Where the disease is extensive, it may be necessary to remove the whole labyrinth and a more thorough operation may be made under a general anaesthetic. Under these circumstances the operation is usually done by the sense of touch, the finger being introduced frequently to locate the diseased tissues and to determine when all dead bone has been scraped away. Great care must be exercised not to break through the cribriform plate. After extensive operations in this region the wound should be swabbed with 95% carbolic acid and the naris packed with surgeons lint or gauze saturated with iodoform and boric acid to prevent bleeding. The packing must not be put in too tightly and it should be changed as often as every two or three days, for about two weeks, or oftener if there is doubt about thorough removal of the pus cavities; the naris being thoroughly washed out at each dressing. When this disease is associated with orbital abscess or fistula an external operation may be needed in addition to the intra nasal treatment. The curved incision for this operation is started at the inner third of the eyebrow and prolonged downward toward the inner canthus. The periosteum and soft parts are raised together and the inner wall of the orbit exposed. If an opening through the bone is found it is enlarged, the ethmoid cells cleaned out and free communication established between the orbit and naris. The cavity may then be treated with carbolic acid and plugged with

gauze and then the external wound is nearly closed and covered with antiseptic dressing.

SUPPURATION OF THE SPHENOIDAL SINUS.

Treatment—Kiaer and Lapalle in 364 autopsies on bodies dead from various diseases, found over 13% affected by suppuration of this sinus, which would indicate that the affection is very generally overlooked. Once the diagnosis has been established the treatment is of the same character as that recommended for other suppurating cavities; that is, the establishment of free drainage and cleanliness with antiseptic and stimulant washes, according to the amount of suppuration and the delay in healing. The normal opening of this sinus is so high up that it is impossible to employ treatment effectively through it; therefore an artificial opening must be made which should be large enough to give free drainage and in some instances to allow of curetting the cavity. In the majority of cases it is not practicable to inspect the normal opening of this cavity until the posterior end of the middle turbinated body has been removed, a procedure which must precede any satisfactory treatment of the cavity. The posterior half of the middle turbinated may be readily removed by curved scissors designed for the purpose and aided if necessary by the nasal snare. This being done and the swelling of the parts having been reduced by cocaine, inspection of the anterior wall of this sinus may readily be made provided the nasal cavity is of normal size. If there is any doubt, it is well to inject into the cavity through the normal opening, by means of a long silver canula attached to a hypodermic syringe, a small quantity of peroxide of hydrogen diluted with an equal part of water. By the foam that will speedily escape if there is pus in the cavity, the diagnosis will be established. The anterior wall of the sinus may be opened by means of Hajek's hook, and forceps, by a trochar, a sharp spoon and punch forceps or by a trephine. The trephine makes the smoothest opening and is therefore to be preferred. A diamond point drill-trephine 6 millimeters in diameter which will not slip, is preferable. With this

instrument one or more clean cut openings may be made. The cavity should be packed with absorbent gauze for 24 hours after the opening has been made by any of these methods. This may be done easily through a gauze packer. If it is considered necessary to curette the cavity, the whole front wall of the sinus should be removed; punch forceps may be used to enlarge the opening when necessary. The sinus has also been opened through its lower wall by means of a trephine, and also by proceeding through the antrum when the latter is diseased; but neither of these operations offers any advantage over those already described. Curetting should be done very gently at the upper part of the sinus, because of the danger of breaking through into the cranial cavity. Turner recommends swabbing out the cavity with pure carbolic acid. The after treatment of these cases is of the same character as that recommended for suppuration of the ethmoid cells. A cure may be expected in from two to four months.

SUPPURATION OF THE FRONTAL SINUS.

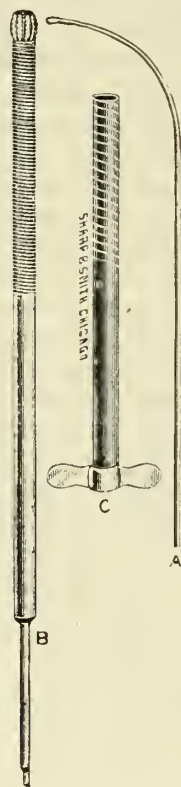
Treatment—Because of the dependent position of the ostium frontale and the direction of the canalis naso-frontalis, not a few patients affected with acute suppuration of this sinus will recover spontaneously. In others the cure is much facilitated by local remedies which reduce the swelling, such as suprarenalin and cocaine which may be used several times daily in the same manner as recommended for suppuration of the ethmoid cells or for closure by swelling of the ostium maxillare, but in a considerable number of these cases the obstruction is due to nasal mucous polypi or to chronic thickening of the middle turbinated body so that it will not be relieved in this manner. In such cases the polypi should be removed or the anterior end of the middle turbinated cut off, or both. This will give free exit for pus provided the canal is large enough and it will allow the local remedies to reach the swollen tissues about the hiatus semilunaris and thus give relief. With still other cases a cure may be effected, after removing the obstruction, by washing out the frontal sinus and the application of antiseptic

solutions. For this purpose equal parts of the commercial solution of peroxide of hydrogen and water may be thrown in through a canula until cessation of the formation of froth shows that the pus has been practically removed. The cavity should then be washed out with a warm solution of boric acid and this should be followed by a 4% solution of protargol or a 15% solution of argyrol.

In many cases, however, the disease does not come under the care of the physician until it has become chronic and then little can be hoped for from the simpler measures, though probably a few of these old cases would be relieved by simply removing the obstruction, and in others the disease could be cured by washing with detergents and antiseptics as just recommended. In other chronic cases the disease may be cured by enlarging the canal so as to give free drainage and then either packing the cavity or washing out with the remedies already suggested; but if polypoid changes of the mucous lining have taken place or if there are septa in the frontal sinus which prevent drainage of some parts of the cavity, or if there has been necrosis of bone, more radical measures may be needed; however, the result will sometimes depend upon whether the suppurative process has been the cause or the effect of an oedematous or polypoid condition of the lining membrane. There are some who hold that this condition of the mucous membrane is nearly always the cause of the suppuration, but the frequency with which mucous polypi are observed in the nares without suppuration shows that the theory may at least be open to many exceptions. It may be, therefore, that a considerable number of the chronic cases of suppuration of this cavity might be cured through the nares without external operation, provided the opening was made fairly free.

It was formerly taught that in diseased conditions it was generally easy to open into the frontal sinus from the nasal cavity by means of a trochar or other sharp instrument, but the danger of perforating the cribriform plate should deter surgeons from attempting this method unless in very exceptional cases. Where the canal can be easily entered, Palmer's frontal sinus drill or Tilley's curved

burrs may be used for enlarging the drainage canal. For this purpose I have recently devised a frontal sinus burr Fig. 1, which is passed in over a pilot and run by a dental engine. I had this made for operating upon a patient who has for years declined to have an



Ingals' Pilot Burr: A, Pilot; B, Burr; C, Shield.

The Pilot (A) is a flexible steel wire that may be used straight or bent in any direction and long enough so that it will project $\frac{1}{8}$ th of an inch beyond the end of the burr when the burr has been slid over it. I have also a longer pilot that will project $\frac{1}{2}$ an inch beyond the burr so as to prevent any possibility of its working down from the frontal sinus when the canal is being enlarged.

The hollow Burr (B) is fastened to a hollow wire cable about $2\frac{1}{4}$ inches long and this to a steel tube about 3 inches long to the end of which is connected the shank for attachment to the chuck of a dental engine. The Shield (C) is flexible for $1\frac{1}{2}$ inches at its distal extremity. In using the instrument the distal end of the pilot is held in position by the canal to be enlarged so that it can not revolve. The proximal end is held in position by the steel tube at the proximal portion of the burr. A removable handle may be fastened to the pilot to facilitate its introduction.

external opening.* I used the instrument on the cadaver and found that it apparently worked perfectly, and I have recently oper-

ated on the patient and found it in every way satisfactory. After anaesthetizing the parts thoroughly and giving the patient chloride of ethyl to unconsciousness, I passed in the burr enlarging the canal to the frontal sinus to 6 m. m. and with a small sharp ring knife with a flexible steel stem curetted the mucous membrane about the ostium frontale. The operation was preceded by thorough cleansing of the cavity and cocainization by means of a 10% solution in a 1 to 4000 solution of suprarenalin thrown in slowly by a small syringe through a long silver canula and allowed to run down beside it. The pilot was then introduced well up into the frontal sinus, the hollow burr was slid on over the pilot and over it the flexible canula to prevent injury of the naris. The burr was slid up on the pilot until it reached the lower end of the infundibulum, and then it was fixed in the chuck to the dental engine and held in place by an assistant. The patient was quickly anaesthetized by chloride of ethyl; then I took charge of the burr, turned on the electricity with my foot and maintained constant gentle pressure until the burr passed into the frontal sinus which it did in from 4 to 6 seconds. The burr was then withdrawn and the frontal sinus and the enlarged canal packed with absorbent gauze soaked in a 95% solution of carbolic acid by which it was thoroughly cauterized. The gauze packer (similar to Wood's uterine gauze packer) was given the same curve as the pilot that had been passed into the sinus. This packing was allowed to remain a few minutes, and next the sinus, the canal and the naris was thoroughly packed with iodoform gauze which was allowed to remain for 4 or 5 days. Orthoform may be thrown into the sinus if necessary to prevent pain. Any of these operations should be preceded by thorough removal of any obstruction in the naris.

Radical Operation—If the canal is completely closed and in any case where the disease does not yield within 4 or 5 months to the treatment already proposed, it is probable that partial septa cause pus pockets in the frontal sinus or that the walls of the cavity are much diseased. In these conditions a radical operation by an external opening

*When this paper was read I had not operated on this patient but I have since done so and the operation was a perfect success.

through the anterior wall of the sinus is necessary. Any operation of this kind should also be preceded by thorough clearing out of obstructions in the naris and time should be allowed for all swelling that follows the operation to subside before the main operation is attempted.

In general this operation consists of lifting the soft tissues, chiseling away a portion or all of the anterior wall of the sinus, scraping out any diseased tissue and making a large opening for drainage into the naris. Various modifications in the incisions and technique are adopted by different surgeons. Formerly a drainage tube was inserted after the operation to keep the drainage canal open, but latterly most surgeons prefer to make so large an opening that a tube is not needed. A general anaesthetic has to be administered for this operation and a Brophy inhaler or some similar instrument that enables the anaesthetist to administer the chloroform through a tube in the mouth, so that the operator's view will not be interfered with, will be found a great convenience. For the operation the surgeon will need several sponges for the throat as well as those for the field of operation, a number of haemostats, a gag to keep the teeth apart, a strong sharp knife, a couple of small chisels, a mallet or trephine and punch bone forceps if the surgeon prefers them to chisels, a small retractor, a Kocher's director or periosteotome, two or three sharp spoons, a Krause's trochar or Tilley's burrs or my own pilot burr for enlarging the canal, with needles and sutures, several strips of gauze and proper dressings. Both eyebrows should be shaved and carefully disinfected and the head should be covered with a sterilized towel. It is well to use boracic acid solution during the operation to prevent any injury to the eyes. Herbert Tilley recommends plugging the posterior nares to prevent the passing of blood into the throat, but this annoyance may also be avoided by the hanging head position or by placing the patient on the face when the opening is made through into the nasal cavity. The incision should extend from the junction of the middle and inner third of the supra-orbital mar-

gin in a curved line forward and downward to the root of the nose about 6 m. m. above the level of the internal canthus. If later this incision is found too small it may be extended farther outward or an upward incision may be made in the position of one of the natural wrinkles in order to avoid a visible scar. When practicable the supraorbital nerve and artery should not be injured. All the structures including the periosteum are divided down to the bone and these should be raised by a periosteotome and held upward by retractor. An opening should then be made above the orbital margin with the chisel and mallet or such other instruments as the surgeon may prefer, sufficiently large to allow of free inspection and curetting of the cavity. The orbital margin itself should be preserved to prevent falling in and an ugly scar. When the bone has been removed, a dark blue lining membrane will be exposed quite different from the white duramater. This should be perforated, the cavity sponged out with gauze and any polypi diseased mucous membrane or necrosed bone carefully removed with a sharp spoon, special care being taken that all recesses and subdivisions of the cavity are carefully treated. An extension of the sinus along the roof of the orbit is frequently present and when so, it must be carefully attended to. The cavity should then be packed with gauze until bleeding ceases, provisions should be made to prevent blood from running into the larynx and then the ostium frontale and canalis naso-frontalis should be enlarged by a Krause trochar which will be guided by the little finger introduced into the nostril or they may be enlarged by means of Tilley's series of burrs or my own pilot burr. In the latter case it would be well to have the pilot sufficiently long so that the end might be passed on out of the nostril where it could be held firmly by an assistant. After the canal has been enlarged any diseased ethmoid cells that appear should be carefully curetted, the wound then dried with gauze and afterwards swabbed thoroughly with a 95% carbolic acid, or a 10% solution of chloride of zinc. Turner recommends that this drainage canal should be large enough to pass the little finger. The frontal sinus is

then lightly packed with iodoform or other antiseptic gauze. Turner brings the end of this gauze out at the inner end of the wound. Walker Downie after bringing the end through the opening in the bone passes it through a small buttonhole incision made in the skin close to the reflection of the upper eyelid and concealed beneath the margin of the orbit. The original incision is then entirely closed. Luc passes the lower end of the gauze strip into the nasal cavity and after packing the sinus completely closes the incision in the skin. He removes the packing through the nose two or three days later. This appears to me the preferable method. The cavity having been packed the external wound is closed partially or completely according to the disposition made of the end of the strip of gauze and the whole is covered with an antiseptic dressing which may remain for one or two days. The wound should be inspected at that time to be sure that all is going well. If there is no fever and the dressing appears sweet the packing may be left in the sinus for 6 or 7 days. The stitches in the skin should be removed as early as possible to prevent scarring.

The foregoing is essentially the operation as recommended by A. Logan Turner who especially urges that the dry treatment be used instead of irrigation. Kuhnt removes completely the anterior wall of the sinus in order to allow it to collapse and obtain union of the two surfaces. This necessarily causes a bad scar. Jensen and Killian remove the inferior wall of the frontal sinus below the supra orbital margin thus obtaining free access to the ethmoid cells and allowing for a certain amount of collapse of the soft tissues without marked scarring. Various osteoplastic operations have also been recommended to avoid this latter defect. Tilley has employed Thiersch's method of skin grafting for forming a new lining membrane of the cavity after it had been thoroughly curetted.

Killian makes his first incision in the eyebrow curving down to the lateral border of the nasal bone about on a level with the internal canthus of the eye. This incision goes down to the periosteum only. The incision through the periosteum is made about 6 m. m.

above the border of the orbit. The soft tissues and perisotium are lifted upward and the frontal sinus then opened with a chisel. The soft parts are then drawn downward and outward toward the eye and the periosteum is removed from the nasal process of the superior maxilla and the lachrymal bone; the floor of the sinus, constituting the upper part of the orbit, is cut through from above and enlarged from below, if necessary; and with a chisel the nasal process of the superior maxilla and the lacrymal bone are cut away the mucous lining being left intact, and with sharp spoon and forceps any diseased ethmoid cells are removed extending even back to the sphenoidal sinus, if desired. The edge of the orbit is left intact to prevent scarring. Having made a very free opening from the frontal sinus, and loosened from its mucous covering and removed part of the middle turbinated body, he cuts the mucous membrane that lined the internal surface of the nasal process of the superior maxilla and the lacrymal bone from above downward along the outer border of the nasal bone, and backward about 5 m. m. below and parallel to the cribriform plate. Then it is cut across at the lower portion of the opening through the bone, thus forming a mucous flap which is used in lining the drainage canal from the frontal sinus to the nose. The cavity is packed with gauze and the external wound accurately closed.

When both sinuses are to be operated upon at once, some do it through a mesian vertical incision breaking down the septum, if one exists, and draining through a single or double canal according to the condition of the ethmoid cells. Others join the two eyebrow incisions, and still others prefer to operate upon each cavity separately, which as Turner states, confines the scars to the region of the eyebrows and allows each cavity to be treated independently which is especially important if one should be slow in healing. A complete renewal of the lining membrane of the frontal sinus and the formation of new membrane in the drainage canal is a tedious process which may require many months, but the active treatment may generally be closed within a few weeks. Recurrence of the sup-

puration sometimes takes place and may necessitate a second or third operation. Several deaths have been recorded as a result of these radical operations due to osteomyelitis and meningitis or septicaemia.

WHEN AND WHEN NOT TO OPERATE ON THE MASTOID BONE.*

BY H. GRADLE, M. D., CHICAGO.

The operative exposure of the cells within the mastoid process is at present fully recognized as a life-saving operation. The literature of the last decade yields annually reports of some hundreds of cases of intracranial complications and of pyaemia of otitic origin. Of these cases—inevitably doomed without operation—a variable, but large proportion is saved surgically. A review of these reports teaches:

First, that suppuration of the middle ear—both acute or chronic—involves danger to life.

Secondly, that even in the desperate cases thus reported great success attends mastoid operations, although many of them must extend into the cranial cavity, and

Thirdly, that properly timed surgical intervention would have prevented this serious extension of the disease.

But on the other hand, we know, too, that acute mastoiditis gets well in most instances and kills in very few without operation. While chronic mastoid disease ends perhaps but rarely in recovery without operation, it can and does remain stationary and unprogressive in the preponderance of patients.

The indications for mastoid operations are hence not easily drawn, and errors in both directions are not uncommon. Statistics do not help us much in settling these problems. A larger personal experience is of greater value for this purpose.

There are no reliable statistics regarding the fatality of suppuration of the middle ear and of the antrum not treated by operation. The figures of clinics are not decisive, because they contain a selection of the graver

cases. Moreover, all patients with urgent symptoms are now-a-days operated upon, at least in clinics. As near as I can estimate from personal experience and available reports published, the fatality of all otitic suppuration, acute and chronic, is in the neighborhood of one-half per cent. The danger is greatest during the exacerbations of chronic suppurations of the middle ear. The mortality of simple opening of the mastoid process fluctuates in recent reports between 4% and nearly zero. The radical mastoid operation is generally attended by about 8% fatality. In the statistics of the Illinois Eye and Ear Infirmary for five years, of the work done by all attending surgeons, kindly furnished me by Dr. Pierce, 26 simple operations (opening of the mastoid) resulted in two deaths, while in 126 radical operations there were 12 fatalities. Universal experience, however, teaches that most of the deaths are due to the disease, and not to the operation. But no one can claim that an operation of this magnitude does not by itself involve some risk to life.

The indications for opening the mastoid for acute disease can be best defined on the basis of a brief review of the various modes of termination of acute mastoiditis. The mucous membrane lining the mastoid antrum and any cells continuous with it participates in all severe inflammations of the middle ear as has been shown by autopsies. This superficial inflammation of the lining membrane of the mastoid spaces does not, however, constitute clinical mastoiditis. It is clinically a latent process. We speak of mastoiditis only when the inflammation extends into the bony wall of the air cells. The involvement of the bone reveals itself by persistent pain and localized tenderness, as well as by an irregular usually but moderate rise of temperature. This febrile rise is not characteristic in children, and in the course of an acute otitis it is masked by the fever incident to the latter. A protracted slight fever not falling off with free drainage from the affected middle ear is, however, suspicious of mastoiditis.

In at least one-third of all instances acute mastoiditis subsides gradually after a climax

*Read before the joint meeting of the Chicago Medical and the Chicago Laryngological and Climatological Societies March 9, 1904.

of three or four days, provided there is free drainage from the middle ear. Such recovery is least likely in streptococcus infection, but very probable when due to the pneumococcus. In a small number of instances the acute symptoms subside slowly, but a chronic suppuration of the mastoid antrum persists and shows itself by incurable discharge through the middle ear. In a large minority of cases of mastoiditis, especially those due to the streptococcus, the inflammation leads to caries or necrosis in the mastoid process. These destructive processes end in perforation, most commonly on the external surface of the mastoid, less often on the anterior surface into the meatus, and least of all beneath the tip under the muscles of the neck. During the course of any mastoiditis, but especially those forms attended with bone destruction, there exists the danger of an extension of the pyogenic process into the cranial cavity, or, at least, into the lateral sinus, causing ultimately pyaemia. General surgical experience teaches that these dangers are to be feared the most when the pus is under tension, or when bony destruction is going on.

From these data the operative indications can be inferred:

1st. The least suspicion of intra-cranial extension based on persistent one-sided headache or on any cerebral symptoms gives an immediate vital indication.

2nd. Whenever a perforation threatens this should be anticipated by operation, and if it had opened spontaneously through a narrow fistula the danger of pus under tension should be obviated by better drainage. Perforation is inevitable whenever the posterior wall of the meatus of the ear begins to sag, whenever the soft tissues behind the ear show inflammatory infiltration (not merely a pale oedema) or when infiltration begins around and beneath the tip of the mastoid.

3rd. When the characteristic signs of mastoiditis, viz., pain and tenderness, continue to increase after the third day, or even increase rapidly after the second day, immediate operation is the safest course.

4th. When the discharge of acute otitis with mastoid symptoms does not diminish at all in the course of about two weeks of appropriate treatment, chronicity must be expected, even though the mastoid signs diminish. Hence, an operation is now proper.

5th. If the mastoid pain and tenderness begin to diminish after two or three days of climax, the operation may be deferred. Those cases in which the mastoid symptoms remain stationary after the first two or three days belong to the debatable class in which it is difficult to say whether to operate or to wait. If mastoiditis follows otitis, the discharge of which has ceased, the need of operation is greater than when there is still discharge from the middle ear. Streptococcus infection means greater danger and more need of operation than the presence of the pneumococcus or staphylococcus in the pus of the middle ear. As a rule, however, we must individualize in these cases and remain prepared for operation until recovery has begun. In cases of doubt an unnecessary operation may be safer than any unreasonable delay. In all acute cases the only operation to be considered is the opening of the mastoid. The radical operation is entirely uncalled for and improper.

The sub-periosteal accumulation of pus over and above the mastoid region raises the question very often whether to open into the bone or to content oneself with an incision through the skin. Such a sub-periosteal abscess is in some instances brought about by the perforation of an abscess from the interior of the bone. In other cases, however, it may be purely an external lesion without any bone involvement at all. In the latter case a simple incision is followed by an uneventful cure in the course of one to two weeks, while in the former affection healing is very much protracted or does not take place at all if there be a sequestrum of bone. It is sometimes difficult to distinguish between these two conditions. The genuine sub-periosteal abscess occurs only in children, never in adolescents. Its pain and discomfort is associated from the start with

the external swelling, while, if the swelling is preceded by the history of mastoiditis, the pus accumulation means the breaking of a mastoid abscess. When the opening of a supposed subperiosteal abscess is not followed promptly by the subsidence of all symptoms and a rapid lessening of its discharge, the safer plan is to search for a fistula in the bone and to enlarge it.

In chronic disease of the middle ear and mastoid, the operative indications are to be regarded from a different point of view from those in acute cases. A simple opening of the mastoid antrum, although often curative, is generally not the proper operation. It should be the choice in those rare instances in which a profuse incurable discharge is found with well preserved hearing power, especially so when the other ear has poor hearing. For a simple opening of the mastoid does not endanger the hearing. But in most cases a cure is obtained quicker and with greater certainty by the radical operation which converts the antrum, the attic and the middle ear proper, into one continuous and accessible space with exenteration of contents. This is a more difficult operation than the simple opening of the antrum. While perhaps but little more dangerous to life than the latter, the risks of wounding the facial nerve and the horizontal semi-circular canal and of injuring the hearing are greater. Moreover, if not thoroughly done, it does not cure. The difficulty of decision is increased by the impossibility to recognize whether in a given case of chronic otorrhoea the mastoid antrum is involved except when urgent danger signs—external tenderness and pain—are present.

Perhaps the most convenient way of defining the operative indications in chronic disease of the middle ear is to eliminate those cases which do not require operation. It is not proper to resort to operation in the absence of any urgent symptoms until a thorough trial has been given to non-operative treatment. This test of conservative methods should include all procedures by which a cure can be effected. In the uncomplicated instances syringing followed by insufflation of boric acid powder may suffice. Inspissated

pus or secretion pent up in pockets in the attic or in a fistula in the bone may be dislodged by a stream directed into the recess through a fine canula. The pent up pus may become more accessible after the macerating influence of a prolonged earbath with dilute lysol solution. Polypi should be removed and granulation tissue may be cauterized with nitrate of silver solution. In all these instances the efficacy of the treatment is shown after a few days' trial by the disappearance of the odor of the discharge or conversely its futility is indicated by the unchanged stench. In the latter case—or in any case combined with the other methods—capillary drainage should be tried as advocated by Pierce. After thorough cleansing of the meatus the channel is well packed up to the middle ear with a good absorbing gauze, which must be changed at first once daily. Capillary drainage acts in a manner quite different from the other procedures. The foul odor is not promptly removed as after successful irrigation. But the discharge lessens steadily until after the lapse of 3 to 6 weeks the ear has become dry and by this time—odorless. Unfortunately, the cases which yield to no other conservative method except capillary drainage are the ones most likely to relapse.

Only after chronic otitic suppuration without urgent symptoms has resisted all conservative methods or has relapsed repeatedly in spite of apparent cure should the radical operation be considered. If, after such treatment has been properly tested for a sufficient length of time, there remains a discharge free from odor, the danger to the patient is not greater and probably less from the disease than from the radical operation. If, however, the discharge remains fetid in odor, experience shows that the danger from the disease is as great, if not greater, than from the operation, while the latter offers at least complete exemption from future danger if not the certainty of a cure. Hence, under these conditions and in the absence of threatening symptoms the question whether to operate or not must be decided by the patient himself, or at least by his circumstances.

If, however, the fetor of the discharge

resists conservative treatment in a case in which epidermis concretions (cholesteatoma) are recognizable by the persistence of scales of skin in the discharge the danger of the operation is far outweighed by the danger of the morbid condition. Caries of bone likewise may enforce the indications for operation, but not in every instance. A carious spot in the wall of the middle ear can heal completely provided the treatment succeeds in draining the pus so as to render it odorless. But if caries can be detected in an instance in which the fetor of the discharge resists conservative treatment the possibility of pyogenic extension is sufficient to warrant prompt action. Finally, it must be emphasized that a prompt radical operation is the only safe course in all instances in which irritative symptoms indicate active extension of the disease. This immediate indication is given in all chronic instances of otitic suppuration by persistent dizziness, pain or local tenderness, one-sided headache or any symptoms suspicious of intra-cranial involvement.

Discussion.

Dr. J. Holinger: Mr. President.—The indications for operating on the mastoid process in cases of acute inflammation are very pronounced, as are also those in cases of acute inflammation of the mastoid during a chronic suppuration of the middle ear. We may be in doubt, however, in cases of chronic suppurations of the middle ear without acute inflammation of the mastoid process. These cases are very numerous, and require our special attention, as these cases offer usually extraordinary technical difficulties. Here we have to individualize in each case, and the social position and intelligence of the patient are important factors. Patients of the working class, who do not take proper care of themselves, and are indifferent to dangerous symptoms, require operation for chronic suppuration of the middle ear much oftener and much earlier than do intelligent patients of the better classes, having generally also a better education.

Dr. P. J. H. Farrell: Referring to the chronic cases of suppuration of the middle ear. I have found that the clinic cases that come into my service are better if operated without delay. Take the ordinary cases that go from one clinic to another (and we have a great many of them at the Cook County Hospital. I have operated five mastoid cases this week.) I find it useless to attempt systematic treatment, as they will only stay for a few weeks and no permanent good can be accomplished. In that class of patients, with an old chronic suppuration of the middle ear, I would advise operation, and I find results are much more satisfactory both to the patient and myself. Take the routine cases

we get in private practice under ordinary circumstances, in those we will, of course try the usual methods of treatment before advising operation. The percentage of cures without operation in cases that give a history of suppuration for several years is very small, even after months of careful treatment, while all cases are cured by operation and can usually be discharged from the hospital in three weeks or less, perfectly well, with the hearing usually much improved. The long suffering patient is relieved from the depressing effect of the annoying and frequently foul smelling discharge as well as the danger of severe cerebral involvement that so often ensues in these cases.

Dr. Frank Allport: I am sure we have all listened with much pleasure and instruction to the very able paper of my distinguished colleague, who has clearly defined the lines of operative and non-operative indications of mastoid diseases, and while he has thoroughly covered the ground indicated by the title of his paper, and leaves little or nothing to be said, yet I feel it would be an error to leave a paper of this importance without quite a free discussion, for as we well know, honest men may entertain divergent views upon similar topics, and while I entirely agree with Dr. Gradle in the general trend of his article, my own experience would lead me to entertain somewhat different opinions concerning one or two of his expressed convictions. For instance: Dr. Gradle believes (unless I misunderstood him) that in acute or sub-acute mastoiditis, fever, pain, tenderness, etc., are invariably present. Undoubtedly this statement is almost universally true after sufficient pus, granulations, etc., are accumulated within the mastoid process, to evoke such external evidences of internal disease, and yet I meet from time to time with most obscure instances of acute and sub-acute mastoid disease, where the external, objective signs of disease are so slight as to render exceedingly questionable any advice tending toward operative procedures. Some of the most complete examples of bone destruction that I have ever seen have been in patients with scarcely a mastoid symptom, and where I have been almost ashamed to operate. A few years ago a patient was sent me from DeKalb, Ill., on account of a persistent pain at the tip of the mastoid process. There were no other symptoms and no apparent history of a middle ear abscess, and the drum head and tympanum appeared normal. I could not believe a mastoid disease existed and suggested to her family physician a rheumatic or neuralgic etiology. The lady returned in three or four months with the report that there had been no cessation of the pain, and I consented to operate, and it was well that I did, for a more completely destroyed mastoid process I never saw. I could enumerate other similar cases, several that I have seen this winter, but it is not necessary, as enough has been said to show that mastoid inflammation and necrosis are not always heralded by palpable signs.

Dr. Gradle refers to the beneficial effects of the Wilde's incision, especially in the mastoid diseases of children. I think particular empha-

sis should be laid on the fact that this incision is only suitable for very young children, where the antrum is superficially situated, and easily perforated by necrosis from within or a knife from without, and where the bone sutures are as yet unossified and allow a ready egress to pus. In these cases the Wilde's incision may still exert a curative influence, although even under such circumstances a more thorough operation is usually indicated, but in all other cases the incision named after Wilde has become practically obsolete, and should not be at all considered.

Dr. Gradle lays great stress upon the odor proceeding from the ear in suppurating cases. While this symptom is undoubtedly of value in most cases, I do not believe that implicit confidence can be placed upon it, and this opinion is shared by McEwen and others of high authority. The odor may be saprophytic and not especially pathogenic in its character, and I think that some of the most extensive cases of bone necrosis I have ever seen, have been in cases where but little odor existed, and where the discharge was of a thin almost colorless character, and moderate in quantity, and for weeks and months becoming conspicuous from its (at least) apparent absence. I therefore have learned not to depend confidently upon the odor nor quantity of the discharge in forming an opinion concerning the diagnosis, prognosis, and conduct of a case, but do not wish to be understood as ignoring these indications, as I believe with Dr. Gradle, that as a rule they are important guides.

Dr. Gradle refers to the bad hearing results following the radical operation, and while prepared to admit that impairment of hearing sometimes occurs, I believe as a rule that the hearing is either not reduced or is improved. It must not be forgotten that in these cases the ossicles are usually necrosed and retracted up into the attic, where they certainly are no aid to hearing, and in fact I believe are an actual impediment to the transmission of sound to the labyrinth. The same may be said of the presence of the usual mass of granulation tissue, and I believe that a removal of all such diseased and necrosed tissue huddled and grown together by pathological adhesions, will usually be followed, not by an impairment of hearing but by its improvement. So far then from considering that the radical operation is an injury to the hearing power of an individual, I believe that the chances are that the hearing will be improved, and but rarely impaired.

The chief danger lying in the path of the radical operation is facial paralysis, produced, I believe, almost invariably, not by injuring the nerve on its downward course, through the petrous bone on its way to the stylo-mastoid foramen, but wounded on its passage through the middle ear, as the nerve emerges through the inner tympanic wall and passes backward through the facial canal. The first situation of the nerve is well protected by hard smooth bone, and is unlikely to sustain an injury under such circumstances, although it may be done as the posterior meatal wall is removed in the course of the radical operation. The course of

the nerve through the middle ear, however, is a different proposition. The bony covering of the nerve is at the best thin and fragile, and under pathological conditions may be fenestrated by necrosis, and an easy prey to vigorous curettement. It is from this point that I believe that most cases of facial paralysis proceed, and while it is an exceedingly unfortunate sequel to an operation, with care it can usually be avoided, and it may be said for our comfort, that these cases almost invariably recover.

Concerning our readiness to advise the radical operation; I do not believe that we can lay down any hard and fast rules as to how long a discharge shall be allowed to exist before operative procedures are advised. Each case must be judged upon its own merits, remembering that in practically all protracted aural suppurations the antrum, at least and very likely the mastoid cells themselves, are probably participating factors. We must also remember that probably about 50 per cent of the brain abscesses of the world are of chronic otitic origin, and that we should be prepared to endeavor to conservatively eliminate this great etiological factor of the world's mortality. Nevertheless we should remember that the radical mastoid operation is a serious affair, involving serious consequences, and not always fortunate in its results, and an honest persistent effort should be made to heal all chronic otorrheas by regular suitable treatment, before advising the operation. Failing in such an effort, however, by perhaps some weeks of faithful effort, we should not shirk our duty as aural surgeons, but should unhesitatingly advise the elimination of this most potential foe to life and happiness. Discussions have arisen as to how long a patient should receive conservative treatment before operative measures are advised. I do not believe that any rule can or should be crystallized covering this point. It is a matter of conditions, personal equation and experience, and must be settled as circumstances seem to dictate. It may be said, however, that the best aural surgeons, such men for instance as McEwen, Schwartze, Stacke, Knapp, Whiting, Dench and others, are steadily arriving at the point of promptly advising operation after a shorter and shorter interval of persistent discharge, believing that thereby generally better results are obtained, both as to hearing, health and life. Each man must, however, be guided by his own opinions and experiences and while conservatism is of course always a valuable aid to the surgeon in deciding hard problems, timidity may on the contrary often beckon him to his own and his patients destruction.

While much remains to be said, it will be said better by others, and I do not desire to trespass upon the time of the Society, and will simply say that I wish to thank Dr. Gradle for his paper, which has not only pleased but instructed me exceedingly.

Dr. William L. Ballenger: Dr. Gradle has covered the indications so well, that there is very little to say other than to commend the sentiment of his paper. However, there are

certain points that will bear a little further discussion.

In reference to the effects upon the hearing, I quite agree with Dr. Allport in his conclusions, but will not enter into a discussion of the reasons for so thinking, basing my opinion chiefly upon my own personal observation of cases, that it is exceptional for the hearing to be impaired, and the rule is for the hearing to remain practically normal or perhaps a little improved. There is an indication that occurs to me which might sometimes lead us to decide whether or not a radical operation is advisable, and I shall confine my remarks entirely to the chronic cases. This indication is found in the appearance of the drumhead, especially as to the location of the perforation. If the perforation is central, we can be almost sure, although the case is chronic, that the lesion is not a serious one, and may be improved or cured by simple local treatment. If the perforation is marginal, we may be practically sure that there is necrosis somewhere in the tympanic cavity, including the antrum and mastoid cells. We can still further differentiate, I think, by the location of the perforation. For instance, if the perforation is in the post-superior quadrant, and marginal, there is probably necrosis of the incus, and of the antrum, and hence the indications for the radical mastoid operation under such circumstances would be fairly well established if taken together with the other signs. If, on the contrary, the perforation is in the antero-inferior quadrant and is marginal, the necrosis is probably in the anterior portion of the floor of the middle ear proper, and might be easily reached with a curette through the drumhead or through the meatus, without undergoing an extensive operation. Without further elaborating this idea, I would simply say that I believe that by a careful study of the location and character of the perforation we can sometimes gain useful information as to the nature of the operation required, or the nature of the treatment required for the cure of the case.

I am somewhat surprised at the death-rate that Dr. Gradle has given, although it has been taken from rather meagre statistics, perhaps some three hundred cases from the Eye and Ear Infirmary for the last five years. Doubtless, they have had three or four hundred cases during that time, and I am surprised to know that the death rate was so large, although it may be the character of the cases coming to the Eye and Ear Infirmary is worse than usual, being poorly nourished, and not responding as well to treatment as the average run of patients with mastoiditis. This may account for the high death rate occurring in the institution.

I quite agree with Dr. Allport in his conclusions regarding odor. He has quoted MacEwen on this subject, who has stated that it is of very little value in determining the nature of the lesion; that it may be saprophytic in origin, and, therefore, has no significance as to the presence of necrosis. The essayist undoubtedly referred in his paper to the necrotic odor rather than that due to decomposition. Pathologists tell us, particularly those who have studied these cases, that, after two years of chronic sup-

uration there is apt to be caries and necrosis. While perhaps not every case of caries and necrosis should be operated on, still their presence is quite suggestive of danger, and as MacEwen has so well pointed out, a patient with chronic suppuration of the ear is like one going about with a load of dynamite in his head, not knowing at what moment it may explode. I have a case which typically represents this phase of the subject, giving the following history: Seven years ago the patient had scarlet fever, with a free continuous discharge from the ear for some time, but during the interim of seven years there was no appreciable discharge. The probabilities are, however, that, had an examination been made, a discharge would have been found in the external meatus. After seven years there was an acute exacerbation, with intracranial complications, and death.

I have seen three such cases as this within the last three or four years.

As to the advisability of waiting until conservative methods of local treatment have been repeatedly tried, before undertaking the radical mastoid operation, it is perhaps too broad a statement to make. We all see cases that will not tolerate repeated recurrent attacks, but go on to serious complications, and therefore, it would seem to me rather risky, with such persistent suppuration and other symptoms, recurring repeatedly, to adhere to conservative local treatment.

There is one remark I wish to make, and that is that the success of the operation will depend largely upon the exact technique that is used in its performance. In finishing the operation we should determine whether or not the external wound should be closed at once, or whether it should be left open for drainage. Either method may be successful under certain conditions. I simply raise the point, without entering into a detailed discussion of it, as it is not germane to the subject.

As to the exenteration of the ossicles, doing the radical operation, Dr. Gradle has raised the question if, for instance, one ear is deaf and the other is suppurating, he would hesitate to do the radical operation unless there were positive indications for it. The position is well taken, in a general way; the danger is that by performing a radical operation upon the suppurating ear we subject the patient to the danger of losing the hearing in the better ear. In chronic suppurations, as Dr. Allport has stated, we have fibrous adhesions and granulation tissue which interfere with the mobility of the ossicular chain, therefore, the ossicles are not useful, but are hindrances. In such cases a few years ago we were more apt to do an ossiculectomy than the radical operation. We abandoned this method because there was also necrosis which could not be reached through the external meatus, but could only be reached by doing a posterior operation. In such cases we should not try to preserve the ossicles of the ear, because they are already useless, and the patient is better without them. I now have a patient upon whom I did a radical mastoid operation who hears whispered numerals at ten feet; there is almost normal

hearing. There are many points upon which we may have a slight difference of opinion, especially in view of the fact that each case must be individualized.

Dr. A. H. Andrews: This subject is one of extreme importance and interest, not only to specialists, but to those who are not specialists, and I want to say, before entering upon any discussion of the paper, that if there is any time limit placed on the discussions, I shall not surpass it.

I want to approve of the conclusions which Dr. Gradle has reached, and also to say that it is impossible to formulate a list of symptoms that will cover all of the indications. As far as the hearing is concerned, I think we may very safely conclude that if the patient's hearing ability before the operation is a whisper at three feet, the operation will not improve it; while if it is less than that, there is a good chance for its being improved by the operation. I am speaking now of the chronic cases, in which the radical operation has been performed and the ossicles removed. I have had cases who have heard as well as the case Dr. Ballenger mentioned, but it is not the rule; the rule has been a whisper for about three feet after these operations.

With regard to the acute cases, I wish to say that pain is variable. The last patient upon whom I operated had been having a discharge from the ear for one month; he had suffered greatly until three or four days before I saw him. After that he had little pain. I expressed the opinion that an operation would be necessary before he got well. He was a man of considerable intelligence. He wanted to know if an operation was necessary, as his pain was slight. I used rather a homely statement, but one which he seemed to have no trouble in understanding, namely, that while the bone was inflamed it pained; after it was dead there was no further pain; there was necrosis, as an operation the next day revealed.

With regard to the danger in these cases, it is said that pus travels in the direction of least resistance; the inflammatory process is apt to precede the progress of the pus, and if the extension of the inflammatory process is outward, there will be external symptoms, but less immediate danger to life. If the tendency of the pus is inward toward the cranial cavity, there will be less external symptoms and greater danger to life.

Dr. Joseph C. Beck: There are one or two questions I would like to ask rather than to discuss this paper, since there was no allusion made to chronic tubercular otitis, and the indications for such an operation. It is an accepted fact in surgery, that in other parts of the body, in cases of tubercular disease the condition is treated rather by rest than operative procedures; and still there are cases of tubercular otitis media with definite symptoms of tubercular necrosis, and it is a question in these cases, since the lungs are usually involved, whether a radical operation should be

performed or simply a curettement made through the external auditory meatus.

The author of the paper did not refer to the pathological condition known as osteo-sclerosis, without any suppuration, without any history of suppuration, so far as can be obtained from the patient, nor any visible signs of there ever having been any suppuration. Even at the operation there is no evidence of suppuration. Cases of sclerosis of the mastoid usually have the one severe symptom—pain. I presented this subject to the Society a few months ago, and I wish to say that I have examined the mastoid of such cases and have to my satisfaction shown that there are nerve filaments in these bones.

In regard to the indications for operation, where there is facial paralysis without evidence of marked involvement of the mastoid or middle ear, where there is no suppuration from the external auditory canal, what are we to do?

In regard to the diagnosis and the location of the perforation, as mentioned by Dr. Ballenger, there is one test that has been described in this country, first, by Dr. Snyder, which consists in washing the pus from the middle ear and sedimentation by centrifuge, examining for bone dust and cholesteatoma. I can speak favorably of that test, as an aid with the probe in feeling necrotic areas or portions in the middle ear.

In cases of mastoid disease complicated by cardiac or valvular lesions, or pregnancy, should we operate or should we not? I mention this because in the last week or two I have heard of a case of double mastoid operation on a woman who was five or six months pregnant.

In regard to obtaining good hearing after operation, my experience has shown me this of the test cases I have made, that where the hearing was very poor before operation of extirpation of the ossicles, where I obtained a dry ear after the operation, the hearing has been better, but as time progressed and contraction occurred in the region of the foot-plate of the stapes and through the middle ear, the hearing became less, and I think, if the gentlemen who see their cases a good while will test them, they will find the hearing is not as good as after the middle ear has been cleansed.

Dr. William T. Eckley: I wish to ask a question for information, and know of no scientific body better qualified to answer it than this Society. Do surgeons, general or special, in these cases take precautions against involvement of the dural sinuses by obliteration of certain emissary veins? If such precautions are taken, I am unaware of the practice. If they are not taken, what is our justification in ordinary care and ordinary skill?

Certain emissary veins, constant in the adult, establish communication between the dural sinuses intracranially and the extracranial veins, both deep and superficial about the head. These veins and the foramina transmitting them, together with the intracranial and extracranial vascular areas with which they communicate, constitute an emissary system. Emissary veins have no valves; hence the direction

of their blood current at any given time depends on the relativity of intracranial and extracranial blood pressure. In lateral sinus thrombosis post-mastoid edema is attributable to the mastoid emissary vein; conversely, in suppuration of the soft parts covering the mastoid bone or necrosis of the mastoid bone itself, involvement of the lateral sinus may occur, as intimated by Dr. Gradle in his excellent paper.

The gravity of the mastoid emissary vein instanced by the readiness with which it becomes the seat of septic thrombosis, is common to all veins of this class, for they are similar in structure, function and communications. In erysipelas, cranial injuries, suppuration of the scalp and necrosis of the skull, said veins are prone to become the seat of blood poisoning. A number of these veins are, by virtue of their easy accessibility, operable structures. The angular vein, communicating extracranially with the facial and intracranially with the cavernous sinus, is responsible in facial erysipelas for septic thrombosis of this sinus. As a prophylactic procedure, why not ligate the angular vein? For like reasons, when emergency demands, why not ligate the parietal and mastoid emissary veins, if, as is well understood, the gravity of emissary veins, is shown by the readiness with which they become the seat of septic thrombosis, and thus of blood poisoning in disease and trauma of face, scalp, and cranium.

Dr. Gradle (closing the discussion): I feel so much flattered by the discussion which practically confirmed most of the statements made, that I see no reason why I should encroach upon the time of the Society with further details. The questions Dr. Beck asked I have not covered in the paper because they refer to relatively rare conditions upon which there is, as yet, very little unanimity of opinion, and in which very few individual surgeons have had any extensive experience.

I might defend one point of view a little more before leaving the topic, and that is with reference to the significance of the odor in chronic cases of otorrhea. In these cases, where absence of stench is extremely rare, the persistence of it is a very important prognostic indication. If we can remove the stench by one or two syringings, followed by boric acid insufflation, it is next thing to criminal to think of operation, for we can predict that nineteen times out of twenty the patient will get well in a few days or in a few weeks, at most. If, however, properly carried out conservative treatment fails to remove the stench, the case comes under a more serious head, and experience shows that those instances in which the stench persists are the ones which are most likely to lead to subsequent trouble. Invariably, when we examine our own histories of or the reports of other radical operations performed for vital indications, we will find the statement of suppuration from the middle ear with persistent stench.

THE SYMPTOMS AND DIAGNOSIS OF THE SUPPURATIVE DISEASES OF THE ACCESSORY SIN- USES OF THE NOSE.

BY NORVAL H. PIERCE, M. D., CHICAGO, ILL.

The author pointed out those symptoms which are common to suppurative disease of all the accessory sinuses, and in so doing followed Hajek's lines of description. (a) Local symptoms; (b) general symptoms; (c) symptoms produced by complications.

As to local symptoms, headache is especially frequent in the acute forms of accessory sinus disease, but is by no means a constant symptom in the chronic form. Headaches which recur with every attempt at physical or mental exertion, or after unusual indulgence in tobacco or alcohol, may occur in empyemas which are otherwise symptomless (latent empyemas). A diagnosis of nervous headache should not be accepted until a careful rhinal examination has excluded disease of the accessory sinuses. The headache accompanying disease of the accessory sinuses is of a polymorphous character; that is, it may be neuralgic, or it may be diffuse or irradiating, or a combination of the two. These headaches, as systematized by Chiari, were mentioned and described in detail. The neuralgias which accompany disease of the sinuses are chiefly confined to the frontal, to the supraorbital, infraorbital, or maxillary, and the supradental nerves. The terminal branches may be simply irritated, and this irritation may by irradiation be conveyed to the trunk of the nerve, or the end branches may be involved in a true neuritis or perineuritis which may extend to the nerve trunk. There is nothing pathognomonic in the headaches or neuralgias which accompany disease of these sinuses to differentiate them from the same phenomena occurring in other diseases, such as anemia, nephritis, cardiac or stomach disease. In the presence of inflammatory disease of a sinus, we should be on our guard against regarding it as the

causal factor of headache lest other disease of far greater etiological moment exists. Again, the most advanced disease of these sinuses may exist without pain of any kind being present at any time during their history. Nor is the localization of pain difficult for any particular sinus. The pain from ethmoidal or antral disease may be projected to the frontal region, or empyema of the sphenoidal sinus to the occipital region. In acute disease of the frontal and maxillary sinuses the localization of pain on pressure over their respective areas is fairly constant.

The presence of a mucoid, muco-purulent, or caseous purulent secretion, which may be more or less fetid, is the most constant and prominent symptom of inflammatory disease of the accessory sinuses. When the discharge is bilateral, one is justified in suspecting the existence of an empyema.

Disturbance of olfaction is frequently present, and is due either to the mechanical presence of the purulent secretion in the fissura olfactoria, or to an inflammatory change or degeneration in the nerve endings. Subjective kakosmia is most frequent in empyema of the maxillary sinus. Nausea and vomiting occur and may be erroneously attributed to gastritis, which either does not exist or is consequent upon the empyema.

There is nearly always more or less interference with nasal respiration. This is due to the presence of the secretion itself or to polypi, hypertrophies, spurs, or deflections of the septum. Reflex symptoms, such as bronchial asthma, occasionally occur, but are due in all probability more to the polypi or hypertrophies (intranasal pressure), etc., than to the empyema *per se*.

Fever is a nearly constant symptom of acute inflammations of the accessory sinuses, and is to be ascribed to the general infection of which the empyema is a localization.

Under the head of symptoms of congestion and depression, the author grouped hyperemia of the face; scintillations before the eyes; decrease in frequency of the pulse; intolerance for tobacco and alcoholics, because of the intolerable congestion which they produce in the head; irritability of temper; in-

somnia, and the general symptoms of neurasthenia, palpitation, especially after eating, indolence, somnolence, hypochondria, aprosexia nasalis, all of which may be regarded as a direct result of a chronic sepsis.

Pain in the acute variety is sometimes present over the anterior wall of the maxillary antrum. There is a point of predilection for the sensation of pain over the processus frontalis. Not infrequently the patient complains of a sensation as if the teeth on the affected side were too long or longer than their fellows. Empyema of dental origin is sometimes preceded by the well marked pain of dental caries. Most frequently the symptoms of acute coryza mask any local symptoms on the part of the antrum.

As to nasal discharge, the discharge from the maxillary antrum disease is usually expelled through the anterior nares. When, however, there are accessory openings, the discharge may find an outlet in the post-nasal space. Eczema of one introitus is a fairly constant symptom of maxillary sinus disease.

With reference to objective symptoms, the presence of a purulent secretion in the nose is one of the most important, and in numerous cases its presence and location will attract attention to one or the other of the accessory sinuses. Occasionally, by posterior rhinoscopy one can find the muco-purulent secretion coming from an accessory opening of the maxillary sinus. Again, it is possible by reversing Politzer's procedure, that is, by suddenly exhausting the air in the nose, to suck the purulent secretion of the maxillary antrum through the ostium.

The author discusses atypical hypertrophies of the middle meatus; dilatation of the maxillary sinus, and then expatiates upon the diagnosis. The diagnosis of empyema of the maxillary sinus can be invariably made by means of two methods: First, aspiration or irrigation of the maxillary antrum, and by transillumination, or, second, by means of transillumination, and then by irrigation of the antrum in case a positive result by the former procedure is obtained. Aspiration alone is not sufficient, as the secretion may be

too small in amount or too thick to pass through the aspirating needle. One may irrigate the maxillary antrum through a natural opening, i. e., through the ostium—or an accessory opening, or by means of an artificially produced opening. Relatively few cases can be reached through the ostium or natural opening—probably one in ten. However, it should be an invariable practice to attempt irrigation through a natural opening before surgical puncture is adopted.

Speaking of transillumination, he said that this procedure was first used by Heyring for the diagnosis of empyema of the maxillary sinus, and is carried out in a thoroughly darkened room. An electric lamp is placed in the mouth, held firmly between the teeth by the patient, the lips being closed tightly around the handle of the lamp. Before doing this, one should see that the patient does not have artificial plate, gum or tobacco in the mouth. After turning on the light, a rosy glow is found outlining the lower portion of the face. Especially marked is the light in the infraorbital region, and in the pupils there is also a glimmer of the transilluminating light. In empyema of the maxillary antrum one side of the face remains dark, or at least there is an infraorbital shadow. The value of transillumination is estimated differently by different observers.

In frontal sinus disease headache or neuralgic symptoms are more prominent and appear more frequently than in inflammation of any of the other sinuses, with the exception perhaps of the anterior ethmoidal cells.

In the diagnosis in every case of suspected frontal sinus disease one should endeavor, first, to sound the frontal sinus through its natural opening. Only when this is accomplished and pus is seen flowing down the probe in increasing quantities may one be sure of empyema of the cavity. Having done this, one should proceed with irrigation. Probably in much less than one-half of the cases can we pass a probe from the nose to the frontal sinus.

The general symptoms of acute or chronic empyema of the anterior or posterior ethmoid cells have little or nothing to distinguish

them from those occurring in the course of inflammation of the frontal sinus.

The author referred to the division of empyemas of the ethmoid cells, particularly to the obscure and manifest forms. He also spoke of latent or closed empyema, and open empyema.

The subjective symptoms accompanying empyema of the sphenoidal sinus are as inconstant and as non-pathognomonic as empyemas of other sinuses. We must depend for our diagnosis on anterior and posterior rhinoscopy, and the position of the secretion is the first thing to look for. Only rarely are we able to observe the ostium of the sphenoidal sinus by anterior rhinoscopy. Occasionally, however, in cases when the fissura olfactoria is wide, we may observe the purulent secretion coming directly from the ostium, in which case the diagnosis is at once complete.

Finally, the author called attention to one complication of sphenoidal empyema—the extension of the inflammatory process to the orbit. When this occurs, the infection causes abscess of the orbit. The symptom-complex of sudden blindness and exophthalmos is typical. From the orbit the ophthalmic vein may become thrombosed, which thrombosis extends to the cavernous sinus, with accompanying meningitis.

OBSERVATIONS ON THE CHROMATIC VARIATIONS IN THE PRECIPITATED AND SEDIMENTED CHLORIDES, PHOSPHATES AND SULPHATES OF THE URINE.

BY DRs. E. F. WELLS AND JOHN C. WARBRICK.
CHICAGO.

In making a quantitative analysis of the urine for chlorides, phosphates and sulphates using the centrifuge for the purpose of throwing down the precipitates we found certain chromatic variations in the sediment for some time.

For about eighteen months an accurate notation on this point has been made in every urinary analysis made in our laboratories.

The examinations numbered more than 2000 and were numerous enough and inter-

esting to warrant an analysis of the results of our observations and we give these here in the form of a preliminary report.

The urines analysed were from persons mainly beyond middle age and from invalids of every age affected with a variety of complaints. These included acute infections, tuberculosis, carcinoma diabetes, nephritis, disturbances of the circulation, anemias, etc.

In nearly all the cases a specimen of urine for 24 hours was used and the examinations were made daily or less often.

The analysis was done in the ordinary way and included the nature of specimen, quantity in 24 hours, transparency, sediment color, reaction, specific gravity, total solids, urea, chlorides, phosphates, sulphates, albumin, sugar, indican, hemoglobin, casts, blood elements, epithelium, crystals, etc.

The chlorides were thrown down by the 10% solution of silver nitrate.

The phosphates by the alkaline magnesium solution and the sulphates by the standard acidulated chloride of barium solution. The chlorides showed the greatest variety in color and the following remarks are confined to this part of the subject:

The colors of the chloride sediment varied from the purest white, through many shades of yellow, orange, red, green, to black as shown in the drawings.

No two specimens were exactly alike.

The white sediments were more numerous than any other and the shade varied a great deal; through pure white; yellowish white, white with a pinkish tinge, white with a bluish tinge, grayish and dirty white.

The yellow sediments came from the yellowish white and passed through the various shades of light yellow, canary yellow, ochre and deep yellow losing themselves in the oranges, salmon colors, old gold and green sediments.

The reds began with shades of pink then through various shades of pink, pale reds, yellowish red, rose tints, wine colors to dark reds, light, dark, yellowish and seal browns and blacks. In many cases the colors were very pure and beautiful.

It was necessary to shake the test tube after

the addition of silver nitrate to prevent a mottled appearance from forming.

There was no constancy observed in the variously colored chloride sediments with the color, reaction, specific gravity, total solids, total urea, diazo reaction, indican, sugar, etc. For example: Although the white sediments were usually obtained from yellow urines still the sediments were also seen in red and brown urines.

The yellow sediments were mainly noted in yellow urines but were also seen in the red and brown urines. Old gold sediments were found in light yellow, yellowish red, yellow and red urines.

Orange sediments were found only in red urines. Pink, light red and yellowish red sediments were seen in light yellow, yellow, reddish yellow, yellowish red, red and brown urines.

Rose tinted and urine colored sediments were noted in light yellow, yellow and red urines.

A single lilac sediment was noted in a yellowish red urine. The brown sediments, light brown, yellowish brown, seal brown, etc., were observed in red urines but in some cases were seen in yellow and light yellow urines. The brownish black and black sediments were met with in light yellow and yellow urines. In one notable case of chronic interstitial nephritis in which the urine has been continually light yellow, the sediment was regularly black for several years until recently when it changed to a dirty white without any apparent cause.

In comparing the colors of the chloride sediment with the specific gravity of the urine we found the average specific gravity diminished as the colors darkened but the lowest and highest densities were observed in every group of color shades.

The presence of indican, sugar, albumin the diazo reaction did not seem to have any influence on the colors neither did medication, especially with reference to salol, guaiacal, acetanilid, salicylate of soda, oil of wintergreen, morphia, etc. The bulk percentage of the chloride sediment which

varied from a trace 0.1% to 50% does not have any effect on the color.

In some groups of colors, e. g., wine colored sediments the percentage was uniformly low while in others as the pink sediments they were uniformly high.

HYPERNEPHROMA OF KIDNEY, WITH REPORT OF A CASE.*

BY ROBERT WALLACE HARDON, M. D., HAR-
VARD.

Professor Orthopedic Surgery, Post-Grad. Med. School; Professor Orthopedic Surgery and Diseases of Joints, Dearborn Medical College, Chicago, Ill.

The first systematic work upon hypernephromas was reported by Grawitz in 1883, in which it was shown that they were of suprarenal origin. The most complete work up to 1902 is to be found in Borst, where will be found also reviews of all work done up to that time, with references to the same. Both Grawitz and Klebs have conclusively shown that the adrenal tumor is sometimes entirely outside of the kidney capsule, and sometimes contained within. It may be separated from the kidney by a capsule apparently formed by a condensation of renal tissue. At other times a capsule of the kidney itself surrounds it. Many authorities state that for many years it has been well known that accessory adrenal glands have been found beneath the capsule of the kidney, under the surface of the liver, in the retroperitoneal tissues, in the meshes of the solar plexus, along the course of the spermatic artery, in the spermatic cord (simulating fatty tumors), and on the anterior mesometrium near the ovary. In the latter position the rests have only been met with in the fetus at or near full term. As the thyroid gland is frequently transformed into a large tumor, so also may be the adrenal gland, and the similarity of the latter tumors to those enclosed in the kidney capsule is so marked as to be very striking. These tumors usually grow rapidly, but may exist for a very long time without attaining any great size or showing any secondary involvements. Again, secondary malignant

metastases have been found where the primary tumor seemed to be benign and to have attained no great size. They are found in both, and are most frequent between the ages of thirty-five and sixty years.

The kidney is atrophied to a greater or less extent, varying with the compression exerted by the growth. Gross examination shows a more or less nodular surface, sometimes so little marked as not to be readily noticeable. On section, a whitish or yellowish appearance is shown, and the tumor is apparently composed of an aggregation of nodular masses. Hemorrhagic and necrotic areas may or may not exist. The capsule separating the tumor mass from the kidney structure is well marked, firmly adherent, and of a firm fibrous structure.

If the capsule is invaded by tumor cells, the growth is more malignant. At times the microscopical appearance of sections of the tumor is so strikingly like that of the adrenal that it is impossible to distinguish any difference.

Chemically leueethin, in about the same percentage as in suprarenal glands, and glycogen, occasionally present in the latter, are found. The presence of glycogen supports the view that the rests arise in embryonic tissue. Croftan pointed out the iodine reduction reaction common to both the hypernephroma and the adrenal gland, in 1901. In this case the iodine reduction reaction showed after the specimen had been in a formalin bath for several hours.

It is probable that many tumors of the kidney removed and reported as sarcomas, where the patient lived a year or more with no return of symptoms, in reality belonged to that variety which imitates the structure of the adrenal gland.

If malignant, the metastases usually extend along the blood vessels to the lung, liver and often early to the bones. So also the renal vein is often involved early with extensions, the vena cava. Secondary involvement may be direct to adjacent tissues if the capsule is broken down. Bevan, in an unreported case, found early extension to the intestines, and was able to make a diagnosis

*Read before the Chicago Medical Society, Dec. 2, 1903.

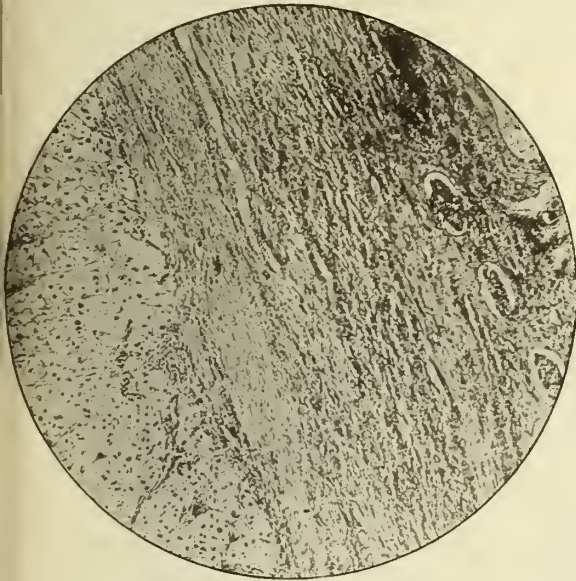
from necrotic masses passed with fecal matter without operation.

Clinically there is usually not much to aid. In a number of reported cases hemorrhage of

brother died of intestinal trouble contracted in the Civil War. Two brothers died young, cause unknown. One brother and two sisters living and in good health.

Personal History. Born in Indiana. Lived in Chicago past twenty-five years. Malaria when a child with occasional recurrences. Married at sixteen years. Never pregnant. Menstruation at 14. Always regular, but scanty. Occasionally painful. Ceased in early forties. For last twelve years has had bearing down sensation in lower abdominal region, accompanied by backache and headache and at one time had some pain in urinating. During this time wore a pessary with some relief. These latter symptoms have been much less marked in past two or three years. About fifteen years ago, had an operation for ulcer of rectum.

Present Indications. About two years ago a slight enlargement was noticed in the right lumbar region, which has progressively enlarged and for more than a year has been tender to pressure, so much so that could not bear the pressure of corsets and felt uncom-



(1) Stained with methylene blue and eosin. Low power. Upper zone resembling adrenal tissue. Lower zone showing fibrous capsule encroaching upon kidney tissue.

a more or less intermittent character was noted. In these cases it is usually well marked, and at times clots may be found in the bladder, or even in the ureter of the affected side. Again, there may be no hemorrhage. Many have marked pain in the back, while others have pain most marked over the tumor mass in front, which may extend well down in the groin, or lower. These symptoms would apply equally well to calculus pain, and the tumor mass to a coincident hydronephrosis. Both may give a sense of fluctuation. It seems probable, however, that with intermittent large hemorrhage containing clots, that the tumor is more likely to be malignant. Nothing has yet been found in the examination of the urine which will lead to an absolute diagnosis, and no absolute methods of medical differential diagnosis are of avail.

History. Mrs. J. W. U. 60 years old. Married. Occupation, housewife.

Family History. Mother died when patient was young. Cause unknown. One



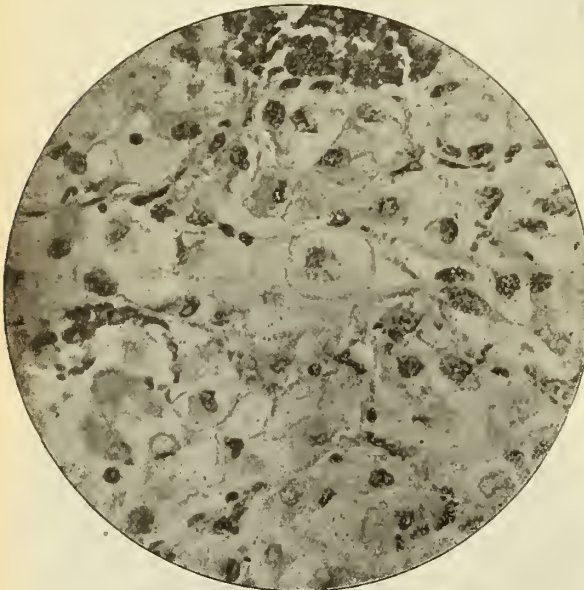
(2) Stained with methylene blue and eosin. Low power. Showing resemblance to adrenal cortical substance. On the right is normal adrenal gland.

fortable during the last six months when clothing fitted closely and because of pain has been practically confined to the house for

a like time. Has also had pain in splenic region and in right back, just above liver line. Appetite vicarious but generally much below normal and missed many meals.

Lost about 15 pounds in last two years. No recent difficulty in urination. Walked into hospital.

Physical Examination. Fairly developed. Poorly nourished. Weight 94 pounds. A neurasthenic. Skin yellowish, muddy, dry. Eyes, marked arcus senilis, myopic. Tongue, moderately coated, moist. Heart, Sounds weak, otherwise normal. Pulse 90, weak. Arteries not easily compressible. Lungs and liver negative. Spleen slightly enlarged.



(3) Stained with methylene blue and eosin. High power. Showing large polygonal and oval cells with small excentrically placed nuclei.

Could be felt. Abdomen, pressure in splenic region causes some pain.

In right lumbar-iliac region a swelling over which percussion is dull from above just below edge of liver to a line about one-half inch below anterior superior spine. On palpation a slightly movable tumor could be felt, having a longitudinal axis of six and one-half to seven inches. Its axis being at about 45° to a cross section.

Pelvic examination and reflexes, negative. Extremities, cold.

Inflation by rectum showed tumor posterior to colon.

Examination Urine. Week before operation: Acid 1016; pale yellow; clear; urea 1.2%; slight trace of albumen. Sediment: few pus cells, and bladder cells and amorphous detritus.

Examination, two days before operation: Acid 1012; pale yellow; clear; urea 1.%; slight trace albumen. Sediment, few pus cells, little blood, bladder cells.

X-Ray examination. Showed darkness in lower part of middle third of tumor, resembling that formed by a stone.

Provisional diagnosis. Hydronephrosis; stone in body of kidney.

Hypernephroma.

The case was seen by Dr. A. R. Crofton in consultation, who made practically the same findings, and who inclined to a provisional diagnosis of hypernephroma. He reported 40% of hemoglobin. Urine as above and advised operation on the ground that patient's condition would probably get gradually worse and if hypernephroma, the liability of metastatic extensions which existed, and that mental conditions would not be improved by long consideration of an operation.

Entered hospital two days following. Pulse, 100, weak. Temperature 98°. Given usual catharsis and skin prepared. Operation, following morning. Urine; acid 1009, light straw color. Clear. Urea 1.2%. Albumen, none. Sugar, none. Sediment, squamous epithelium, occasional pus cells. Few calcium oxylate crystals. Operation, October 3, 1903, at Mercy Hospital.

Legs and arms bound in cotton. Ether anaesthetic. Patient on left side with sand-bag lumbar elevation of five and one-half inches. Lumbar incision to crest of ilium and then forward. Wound seven inches in length down to suprarenal tissue. The latter was separated with fingers, when an adhesion covering an area the size of a fifty cent piece to the colon was found, and separated.

Tumor pressed by assistant, up into wound and lifted out of cavity. Pedicle, including renal artery and vein, clamped and tied, first lightly again tightly beyond clamps. Ureter tied off low down. Examination of sur-

rounding tissue showed no enlarged glands, no irregularity on under surface of liver.

Wound dried, small gauze drain inserted, edges of cut tissue approximated layer by layer and sewed with catgut. Skin with silk-worm gut and dressings applied. Operation forty minutes.

During operation pulse went up to 180, and 2000 c. c. of normal salt solution injected. Catheterized before leaving the operating table.

Returned to bed. Pulse fell to 104 in

of urine. Acid 1020, light yellow. Urea 2%. No albumen.

Second day. Given enema three times in bed for flatus. Had a great deal of pain in trying to retain enema. Later allowed to get out of bed on commode when much flatus passed easily. Was out of bed for forty minutes at this time, and every day following for an increasing length of time. On this day gastro-intestinal disturbance caused diarrhoea with much mucous and flatus for which temporary treatment was required.



(a) Entire tumor about 3/7 actual size. Tumor and remaining kidney substance laid open with usual incision.

twenty minutes following salt solution. No vomiting followed the operation.

After operation. Lips moistened with water or weak tea, as soon as desired, and allowed in small amounts.

Catheterized seven hours after the operation. 180 c.c. of urine. After this passed urine voluntarily.

First day. Liquids freely and soft diet. 590 c.c. urine in first 24 hours. Examination

Allowing patient out of bed gave her great comfort and caused much less distress during bowel movement than when movements were had in bed. Sat up in all three hours and a quarter. Drainage removed. Wound dry.

Urine, 670 c.c. in 24 hours. Liquids pushed.

Examination of urine, Acid 1020 sp. gr., light yellow. Urea 2%. No albumen.

Third day. Urine, 880 c.c. in twenty-four hours.

Fourth day. Urine, 1180 c.c. in twenty-four hours.

Fifth day. Urine, 1300 c.c. in twenty-four hours. Part of sutures removed, wound dry. Regular diet, forced liquids.

Sixth day. Urine, 920 c.c. in twenty-four hours.

Seventh day. Urine 1290 c.c. in twenty-four hours. Examination urine, Acid, sp. gr. 1015, straw color. Urea 1.9%. No albumen, few pus cells.

Eighth day. Urine 1090 c.c. in twenty-four hours. Rest of sutures removed. One stitch infection. Out in wheel chair.

Ninth day. Urine 1710 c.c. in twenty-four hours. Out in wheel chair in garden. Weight 96 pounds.

Tenth day. Urine, 1650 c.c. in twenty-four hours. Appetite fine.

Eleventh day. Urine, 1590 c.c. in twenty-four hours. Appetite fine.

Twelfth day. Urine, 1930 c.c. in twenty-four hours. Appetite fine.

Thirteenth day. Urine, 1450 c.c. in twenty-four hours. General tonics.

Fourteenth day. Urine 1970 c.c. in twenty-four hours.

Fifteenth day. Urine 2080 c.c. in twenty-four hours.

Sixteenth day. Urine 1790 c.c. in twenty-four hours. Examination, Acid, sp. gr. 10.10, light yellow, clear, urea 2%. No albumen, no sugar. Occasional pus cell. Occasional hyaline cast. Out of bed all day. Could have gone home.

Seventeenth day. Urine, 2080 c.c. in twenty-four hours. Weight 97 pounds.

Eighteenth day. Urine 1790 c.c. in twenty-four hours.

Left hospital twenty-seventh day after operation. Weight, 100½ pounds.

Urine examination: Acid, sp. gr. 1012, pale yellow, clear. 0.8% Urea. No albumen. No sugar casts.

November 1st, nearly two months after operation: Weight, 108 pounds.

Examination of Urine: Acid, sp. gr. 1012, light straw. No albumen, no casts, occasional leucocyte.

Much improved physically and nervously. Eating well, going out doors to stores. Still complains of some pain in right lumbar region and splenic region and elsewhere at times, but entirely free the most of the time.

NOTE—In a letter dated January 10, 1904, from California, the patient writes as follows: "I go out for a long walk every morning. Get tired, but don't mind when I rest up. I get weighed every Monday morning, and now weigh one hundred and thirteen." She is in fact doing as other people of her age in fair health do.

Pathological Description of the Specimen. Weight, 465 g.m. Irregular in shape. Greatest diameter 10 c.m.; length, 15 c.m. Upper four-fifths of the surface roughened and in places slightly nodular, the lower portion smooth normal kidney capsule. Over a surface about the size of a fifty cent piece a slightly oozing surface where adhesions had taken place to the colon.

On section, about four-fifths of the specimen shows new growth extending down to and including about three-fourths of the pelvis, and is surrounded by a well marked capsule, which separates it from the remaining normal kidney substance. The capsule was five or six times as thick as that of the normal kidney and firmly adherent. The body of the tumor was of a yellowish color for the most part, with whitish areas more or less necrotic, and a few small hemorrhagic areas existed.

The microphotographic reproductions show well the finer pathological findings.

I am indebted to Dr. A. A. Goldsmith for the preparation of specimens and Dr. F. R. Zeit for the pathological confirmation of the diagnosis.

CONCLUSIONS.

1. Hypernephromas are malignant, sometimes benignant, and may exist for years without any secondary involvement or any sign of malignancy.

2. When malignant, not so much so as sarcoma.

3. Those having an intact capsule justify a better prognosis than when the capsule is broken down.

4. Those showing marked hemorrhage be-

fore operation do not justify as good a prognosis as those that do not.

5. That the tumors grow from embryonic adrenal rests.

Bibliography.

1. Grawitz: Virchow's Archiv, XCIII, 39, 1883.
2. Birch-Hirschfeld: Lehrbuch der Path. Anat., Band II, Hft. 2, 383, 1895.
3. Kelly: Ziegler's Beitrage, XXII, 385, 1898.
4. Busse: Virchow's Archiv, CLVII, 377, 1899.
5. Croftan: Jour. Am. Med. Assoc., Jan. 10, 1903.
6. Bland Sutton: Tumors, Innocent and Malignant, 127, 1903.
7. Borst: Vol. II, 1902.

103 State street.

ORDER OF PROCEEDINGS.

REGISTRATION OFFICE—ODD FELLOWS HALL.

FIRST DAY—TUESDAY, 9 A. M.

I. Call to order in a general session, Unitarian Church, by the President.

Carl E. Black, Jacksonville.

II. Report of Committee on Arrangements, E. Mammen, Bloomington.

III. Announcements by the President.

IV. 9:15 A. M. Call to order of Section One, Unitarian Church.

V. 9:15 A. M. Call to order of Section Two, Odd Fellows Hall.

VI. 1:00 P. M. Adjournment.

FIRST DAY—AFTERNOON.

VII. 2:00 P. M. Call to order for Continuation of Sections One and Two.

VIII. 2:00 P. M. Call to order of the House of Delegates by President in the Assembly Room, Illinois Hotel.

FIRST DAY—EVENING.

IX. 8:00 P. M. Call to order by Vice President, Unitarian Church.

Robert A. Preble, Chicago.

X. Invocation.

Rev. L. D. Osborn, Ph. D., Bloomington.

XI. Vocal Solo.

Mrs. F. C. Vandervort, Bloomington.

XII. Address of Welcome.

Hon. Adlai E. Stevenson, representing Mayor George W. Morrison.

XIII. Address of Welcome, On behalf of McLean County Medical Society.

F. C. Vandervort.

XIV. Response on behalf of the Society, President Carl E. Black.

XV. President's Annual Address.

Carl E. Black, Jacksonville.

XVI. Address of Section One.

William E. Quine, Chicago.

SECOND DAY—WEDNESDAY MORNING.

I. 9:00 A. M. Call to order for Continuation of Sections One and Two.

II. Special order Section One, Symposium on Tuberculosis, Unitarian Church.

III. Section Two, Odd Fellows Hall.

IV. 1:00 P. M. Adjournment.

SECOND DAY—AFTERNOON.

V. 2:00 P. M. Call to order Sections One and Two.

VI. Special order Section Two, Symposium on Carcinoma, Odd Fellows Hall.

VII. 2:30 to 4:00 P. M. Reception for visiting ladies by Mesdames J. W. Smith, W. E. Guthrie, E. Mammen, J. B. Taylor, J. L. Volten and Dr. E. J. Hyndman, at the residence of W. E. Guthrie.

SECOND DAY—EVENING.

VIII. 7:00 P. M. Reception and Annual Dinner, Cooper Hall.

THIRD DAY—THURSDAY MORNING.

I. Call to order for Continuation of Sections; Papers and Discussions.

II. 10:00 A. M. Call to order in General Session by President to receive report of House of Delegates.

III. 1:00 P. M. Adjournment.

THIRD DAY—AFTERNOON.

IV. 2:00 P. M. Call to order for Completion of Sections One and Two.

V. Induction of the President elect.

VI. Final Adjournment.

SECTION ONE.

PRACTICE OF MEDICINE, MEDICAL SPECIALTIES, MATERIA MEDICA AND THERAPEUTICS, ETIOLOGY, PATHOLOGY, HYGIENE, STATE MEDICINE AND MEDICAL JURISPRUDENCE.

Chairman, J. W. Pettit, Ottawa.

Secretary, E. B. Montgomery, Quincy.

Address—"The Powers and Limitations of

the Physician as Distinguished from the Surgeon." William E. Quine, Chicago.

Symposium on Tuberculosis.

Set for Wednesday at 9 a. m., Third Floor Odd Fellows Hall.

1. (a) Prevalence and Mortality from Tuberculosis in Illinois. George W. Webster.
- (b) Charles L. Mix.
- (c) Frank Billings.
- (d) Robert M. Preble.
- (e) Economic Loss from Tuberculosis in Illinois. Homer M. Thomas.
- (f) Duty of State. H. N. Moyer.

2. "Regarding the Contagiousness of Typhoid Fever and the Vitality of the Typhoid Germ." F. D. Rathburn, Galesburg.

1st. The vitality of the typhoid bacillus in the living body, or for what length of time after convalescence is the patient liable to communicate the disease by the excreta.

2. The vitality of the germs outside the living body, and their power to generate in soils and other favorable media.

3d. The proper disposition of the excreta in order to prevent the spread of the disease.

The germ has been shown to remain active for a considerable length of time after the fever in (1) post typhoid abscess; (2) the urine; (3) contents of lung cavities; (4) gall bladder and (5) evacuations from the bowels.

The Eberth bacillus has been found active and able to reproduce itself in (1) the body of those dead of typhoid fever; (2) soil; (3) water; (4) sewage, etc., for months, and in some instances probably for years.

The proper disposition of the excreta the only method of prevention. Cremation the best method. When cremation is not practicable suggestion made to deposit excreta in heavily glazed earthen ware receptacles, treat with germicides, and bury deeply at a distance from the water supply.

3. "Pancreatitis, with Report of a Case." F. A. Guthrie, La Salle.

4. "The Physicians Civil Liability for Malpractice." A. L. T. Williams, Pana.

5. "Mental Disorders of Neurasthenia." Frank Parsons Norbury, Jacksonville.

Eductions: Mental symptoms are of importance in every case. They vary from slight mental incapacity (asthenia) to pronounced state, "border line" to insanity. Principal symptoms are—introspection, imperative conceptions, morbid fears, irritability (marked by absence of symmetry), nagging, fault-finding, excessive emotional outbreaks.

Physical Factors: Heart, kidney, stomach, bowels, menstrual and sympathetic nerve implications, Anaemia.

Differential Diagnosis: From premonitory symptoms of paralytic dementia, true mental disease, spinal cord lesions, focal organic diseases of the brain, etc., etc.

Treatment: Isolation, systematized rest, with adjuvant indicated in each case. Treatment of associated physical factors.

6. "Medical Ethics; Its Relation to the City Health Officers." F. E. Wallace, Monmouth.

It may seem strange that such a subject is brought before a society of physicians for discussion. The golden rule should be ever before us. The Health Officer should be on friendly terms with every physician because they must work together for the common good.

The laity is a very critical judge.

They should be enlightened and should thoroughly understand the necessity for preventive measures. Some physicians are possessed with "cussedness" as well as the laity and consequently many lives are sacrificed. Criticisms are many for the health officer and physicians could prevent it.

Boards of Health receive their power direct from the statutes. Because your opinions differ from those of the Health Board, don't cause trouble and hard feeling. Don't give adverse opinions, but be willing to take the opinions of the higher authorities, on diagnosis. How happy the physician who can dwell in unison with his fellow colleagues. Let us help the Health Officer to hold up his hand. Don't be a "knocker." Be a good fellow and hide your little hammer.

7. "The Treatment of Appendicitis from a Pathological Standpoint." E. C. Franing, Galesburg.

Differences of opinion on the treatment from a clinical standpoint. Physio pathology. Forms classified bacteriologically. Forms classified pathologically. Treatment of various forms, especially discussing the Ochsner and operative treatments.

8. "The Relation of Medicine to Surgery." James E. Coleman, Canton.

The author thinks that where as in former days, the surgeon was first and foremost a fine physician, now surgeons neglect medicine. Is Pneumonia a surgical disease? Or Tuberculosis? Some avoidable surgical affections of the ovaries.

9. "Myocarditis Occurring in Elderly People with Special Reference to Treatment." E. H. Butterfield, Ottawa.

10. "Leukaemia: With Special Consideration of its X-Ray Treatment." Everett J. Brown, Decatur.

Reasons for reporting and stand-points taken and history of cases of the Splenomedullary, having a Leucocyte count of eight hundred thousand, and a greatly enlarged spleen in which X-Ray caused disappearance of all symp-

toms. Considerations of cases in literature so treated. Summary.

11. "Polyneuritis." L. Harrison Mettler, Chicago.

Multiple neuritis a much abused term. The general conception of the disease and the textbook descriptions of it are far too narrow. It is a disease more or less of the entire nervous apparatus. Explanations of its peculiar symptomatology. Central and peripheral types of the disease. Relative significance of the interstitial and parenchymatous disease processes. Relative importance of the particular etiological influences. Clinical indications of the extensive nature of the disease. Pathological proofs. Differential diagnosis of types varying upon treatment. Practical conclusions.

12. "Bacteriuria: With Special Reference to Colon-Bacilluria." Arthur R. Elliott, Chicago.

13. "Some Disorders of Sleep." Hugh T. Patrick. Chicago.

14. N. S. Davis, Jr., Chicago.

15. "Atonic Dilations of the Stomach with Report of Cases, also Methods of Treatment." Milton N. Mack, Chicago.

16. "Mosquitoes and Malaria." Thomas H. Bath, Bloomington.

Successive scientific data confirming the mosquito as the definite host of malarial fever.

17. "Defective Speech." James Moreau Brown, Chicago.

A general consideration of speech disorders, laying particular stress on etiology and treatment and discussion of the so-called "Stammering Institutes" and reasons why cases of this character should be cared for by the physician.

18. "The Exercise of Preventive Medicine a Factor in the Social Evolution of Man." S. O. Hendrick, Henry.

19. "Some Remarks on Tuberculosis in Young Children; with Report of Two Non-Tuberculous but Suspected Cases That Illustrate Some of the Points of Differential Diagnosis." Robert H. Babcock, Chicago.

20. "Defects of Vision and Hearing in the Public Schools." J. Whitefield Smith, Bloomington.

21. "The Pneumonia Problem." Arnold C. Klebs, Chicago.

21. (1) Investigations into statistical data about pneumonia and its increase in the United States and abroad. (2) Comparison of non-tuberculous respiratory diseases and tuberculo-

sis, clinical and statistical. (3) To what extent do these qualify us in speaking of the "Pneumonia Problem?" (4) Dangers of pneumonia, to the individual and to the community, and how they can be met.

22. "Treatment of Pneumonia." Charles J. Whalen, Chicago.

Increasing prevalence of. Pneumonia a contagious disease. Comparison of mortalities from pneumonia and tuberculosis. Possibility of making headway against the disease from the prophylaxis standpoint. Need of popular education of the public as to the dangers of pneumonia. No known specific for. Expectant treatment most satisfactory. Rest, ventilation, sponging, elimination, poultices, and blistering. Value of antipyretics, serum therapy, venesection, arterial sedatives, oxygen, opium, creosote, normal salt solution, suprarenalin, stimulants, expectorants, etc.

23. "Brain and Sinus Diseases Resulting from Purulent Otitis Media." A. H. Andrews, Chicago.

Brain and Sinus complications more common than generally supposed. Pus in mastoid escapes in one of six directions. Intracranial complications may be: general meningitis; extradural abscess; cerebral abscess; cerebellar abscess; sinus disease. Symptoms, treatment, report of cases.

24. "Radio-Activity." J. C. Sullivan, Cairo.

Primordial matter. The sun's rays are electrical and curvilinear. The cause of all radio activity and absorption. The X-Ray can duplicate any therapeutical result obtained by radium.

25. "The Mineral Springs of Illinois: Their Therapeutic Application." George T. Palmer, Chicago.

26. "Lumbar Puncture: Its Value in Diagnosis and Treatment." E. P. Cook, Mendota.

27. "Joint Affections as Viewed by the Internist; Their Classifications and Brief Considerations." August F. Lemke, Chicago.

Reasons for attempt at classification. What is the nature from the standpoint of pathogenesis of the various joint affections recognized as inflammatory. Are any of the so-called inflammatory lesions of joints of other than microbic origin. The micro organisms that have been demonstrated in joints. Are any of the joint affections due strictly speaking to metabolic disturbances, directly. The neuropathic joints, those associated directly with nervous diseases. The pulmonary osteo-arthritis. Joint lesions that have been known to be associated with skin diseases, particularly psoriasis. The joints of angio-neurotic oedema.

What are the distinguishing features between the joint diseases known as the rheumatic ar-

thritides and the group known as arthritis deformans. The importance, to treatment, of establishing the etiology. The treatment of some of the more important joint lesions briefly considered.

SECTION TWO.

SURGERY, SURGICAL SPECIALTIES AND OBSTETRICS.

Chairman, Emerson M. Sutton, Peoria.

Secretary, Rudolph W. Holmes, Chicago.

Address—"Surgical Treatment of Gall-Bladder Diseases." Albert J. Ochsner, Chicago.

1. "A Case of Mastoid Operation Embracing Some Unusual Features." H. W. Chapman, Whitehall.

Mr. F. G., telephone lineman, aged 19 years referred to me by his attending physician May 12, 1902. At age of five years had scarlet fever, complicated with suppurative otitis media O. D. which latter has continued uninterruptedly to time of his first visit. Three months previously pain and swelling over mastoid right side which has continued to grow worse and was the cause of his visit. Operation on mastoid May 29, 1902.

Antrum $1\frac{1}{2}$ c.m. back of and 2 c.m. above external auditory canal, and $3\frac{1}{2}$ c.m. deep. After final removal of drainage tube, a permanent sinus, 7 m.m. in diameter, lined with epithelium from the integument, remains.

Water thrown with syringe into auditory canal issues from the sinus in a full stream, spurting out 7-8 c.m. Water thrown in same manner into sinus, issues from meatus in a similar stream. All discharge stopped, no pain or soreness since operation. Resumed occupation of climbing telephone poles one month after operation and has continued at it uninterruptedly ever since. P. A. A. D. 12-160.

2. "Differential Diagnosis Between Pseudo-Membraneous Angina of Syphilis and Angina of Diphtheria." R. R. Campbell, Chicago.

Difficulties encountered. Treatment. Results.

3. "Remarks on and Reports of Additional Cases of Sigmoid Sinus Thrombosis from Middle Ear Suppuration." Norval H. Pierce, Chicago.

Symptoms of thrombosis of Sigmoid Sinus. Symptoms simulating Sinus thrombosis from mastoid softening with intact Sinus. Ultimate diagnosis of Sinus thrombosis. How shall we explore the Sinus and when. Before opening the Sinus shall we ligate the common jugular vein.

4. "Acute Infantile Middle Ear Suppuration." Willis O. Nance, Chicago.

Acute otitis media of infancy and early childhood frequently an unrecognized process. Recent investigations of Ponfick, Barth and others demonstrate that a large proportion of infants and young children at some time suffer from middle ear inflammation. Dangers from non-recognition.

Close relationship between acute purulent otitis media and acute infectious processes other than diphtheria and scarlet fever, e. g., gastrointestinal disturbances and bronchopneumonia.

Structural variations between the infant and adult middle ear, and the diverse characteristic manifestations of inflammation in each. Diagnosis and treatment of acute infantile otitis media.

5. "Infectious Ulcers of the Cornea." William H. Wilder, Chicago.

Underlying cause to be sought in impaired vitality of the tissues from a general or local depraved nutrition.

Active cause some trauma (sometimes apparently insignificant) supplemented by virulent infection.

The source of infection frequently in tear-sac. Character of infection.

Clinical appearances and dangers.

Importance of prompt recognition and active treatment. Prominent role of cauterization of the ulcer and constitutional measures in the treatment.

6. "Some Clinical Facts in Eye and Ear Work." J. B. Taylor, Bloomington.

(1) Experiences in use of compressed hot air in connection with vibration processes for deafness.

(2) Case of Iridodialysis.

Case of deep operation with magnet for penetrating steel in eye, without inflammatory reaction.

Case of proliferating retinitis hemorrhagica, both eyes. (All cases exhibited.)

7. "Brain and Visceral Syphilis from a Surgical Standpoint." William E. Schroeder.

8. "Cholecystitis." M. L. Harris, Chicago.

Influence of micro-organism in the etiology of cholecystitis. The great length of time microbes may remain active or retain their vitality in the gall bladder. The diagnosis of cholecystitis and the great frequency with which it is mistaken for other conditions.

The advantage and necessity of drainage of the gall tracts in these cases and the length of time it should be continued.

9. "Gall Stones." J. L. Wiggins, East St. Louis.

Past: Indefinite conclusions as to the causation factors of Gall Stones and their resulting

sequela, both immediate and remote. Most plausible and generally accepted theory being that they were of humoral origin, resulting from nutritive derangements, influenced by climate or environments. Treatment, medical, with object of, first, relieving blood of excess of those elements thought most favorable to Calculi formation; second, dissolving concretions already formed; third, aiding escape of Calculi through so called natural channels.

Present: Acceptance of the theory of infection as a necessary precedent of Cholelithiasis. Correctness of conclusions proven; first, by artificial infection; second, by clinical investigation. Former theories of conditions thought to be causation factor, now proven as only contributing factors. Treatment, operative; first, simple. Cholecystostomy; second, radical. Cholecystectomy. Operation not a matter of individual choice, but influenced by degree and extent of pathological involvement.

Future: No reason why the progress recorded in the past decade, in early recognition and operation for relief of Cholelithiasis, should not be continued so that the primary infection could be recognized in time to avoid pathological involvement not fully amenable to simple Gall-bladder drainage, thereby anticipating and aborting formation of concretions. Primary infection under present conditions not as obscure as terminal affections in the past.

10. "Kidney Surgery." Arthur D. Bevan, Chicago.

Brief historical review. Pathological conditions, warranting surgical interference. The means of diagnosis. Nephrography. Nephrotomy. Nephrolithotomy. Nephrectomy. Plastics on kidney and ureter. Prognosis after kidney operations.

11. "Report of a Case of Subcecal Hernia." A. E. Halstead, Chicago.

12. "Empyema." J. Herbert Franklin, Spring Valley.

Empyema. Anatomy. Attachments of Pleura. Etiology and Symptomatology briefly. Paracentesis. Thoracotomy. Thoracoplasty. Irrigation. Drainage. Adhesion.

13. "Liver Abscess following Typhoid Fever." S. M. Miller.

14. "Some Interesting Cases of Subcutaneous Injuries of the Abdominal Walls and Viscera." D. N. Eisendrath, Chicago.

The necessity for a more general knowledge of the subject by the practitioner as well as the surgeon.

Many lives might be saved by prompt recognition of serious injuries of the abdominal viscera, in which there is only slight injury of the skin. Division of the abdominal organs into solid and hollow viscera. Greater amount of protection of certain organs. Manner in which injuries occur. Mode of examination for the purpose of making a diagnosis. Report of a

number of cases. Statistics and deductions from same.

15. "Office Treatment of Fissure in Ano." J. R. Pennington, Chicago.

Outline: Definition and description. Some of the etiological factors and more important symptoms. Diagnosis. Treatment: Non-operative, operative. Divulsion of the external sphincter without the use of the ordinary general or local anesthetics.

16. "Appendicitis." S. C. Stremmel, Macomb.

A plea for early and interval operation. Interesting statistics. Summary.

17. "Pregnancy and Appendicitis." Chas. B. Reed, Chicago.

Reciprocal influence existing between the inflamed appendix and the "fruit sac." Disastrous consequences for the gestation and foetus. Mortality statistics of this condition as compared with other serious complications of pregnancy. Difficulties of diagnosis during pregnancy. Desirability of adopting a definite mode of procedure in these cases. The desirable objective of treatment. Radical treatment as a routine measure.

18. "Report of a Case of Intestinal Obstruction, With Remarks as to the Treatment Followed." J. F. Percy, Galesburg.

Details of a case operated upon. Insistence upon early operation. Best methods of treatment before consent for operation is obtained. The wisdom of temporizing operative methods in a case of intestinal obstruction where exhaustion is extreme.

Symposium on Eclampsia.

19. (a) "Etiology and Symptomatology of Eclampsia." Gustav Kolischer, Chicago.

(1) Definition; (2) differential diagnosis; (3) kidney in Eclampsia; (4) urine in Eclampsia; (5) pathologic findings in other organs; (6) infection theory; (7) foetal metabolism theory; (8) Veit's theory; (9) clinical symptoms; (10) prognosis.

(b) "Pathology of Eclampsia." Frank W. Lynch, Chicago.

(c) "Medical Treatment of Eclampsia." H. H. Whitten, Peoria.

1. Prophylactic. (a) Education for the doctor. Renewed realization of responsibility. (b) Education for the patient. Pregnant women should be taught the importance of early consulting the family physician. Pregnant women should be taught mental and physical hygiene, including food, exercise and dress. Pregnant women should be taught to watch carefully the eliminating functions. (c) Examination of the

urine at regular intervals. Treatment if albuminuria exists.

2. Treat in the attack. (a) Secure quiet and take measures to prevent self inflicted injuries. (b) Consideration of various drugs. Chloroform. Morphine. Veratrum viride. Chloral and Bromides. Diuretics and purgatives. Normal Salt Solution.

3. Treatment after the attack. Sedatives. Eliminative agents. Tonics.

(d) "Operative Delivery in Eclampsia." Charles S. Bacon, Chicago.

Before occurrence of convulsions, that is, in threatened eclampsia. Indication for operation. Maternal and fetal. Induction of labor. Least disturbing method should be chosen. Rupture of membranes in hydramnion, etc. Krause otherwise. Vaginal Caesarean section. Advantage in avoiding danger of long labor.

After occurrence of convulsions. Reasons for operating concern mother and child. Conditions necessary for operation. Good facilities. Value of hospitals in these cases. Contra indications to operation. Absence of facilities. All operations should be under anesthesia (ether). When cervix is completely dilated.

Forceps or other delivery operation. When cervix is effaced but only slightly or partially dilated. In hospital, deep incision and immediate extraction. In less favorable surroundings. Digital or bag dilatation followed by extraction. When cervix not effaced either at or before beginning of labor. In hospital, vaginal Caesarian section, description of operation. Where no hospital facilities. Induce labor and dilate slowly. Anesthetize, dilate with branched or solid dilator to admit one finger, rupture membranes, introduce Voorhees bag, withdraw anesthetic, after expulsion of bag anesthetize again and introduce bag, finally deliver.

During this time which may take several hours, prevent convulsions with morphine, sweat, purge, use salt solution and if necessary oxygen.

Discussion will be opened with an analysis of thirty cases—Jos. B. DeLee, Chicago.

Symposium on Carcinoma.

Special order Wednesday, 2 p. m.

20. (a) "Etiology and Pathology of Carcinoma." Gustav Futterer, Chicago.

(b) "Carcinoma of the Gastro-Intestinal Tract." J. B. Murphy, Chicago.

(c) "The Ultimate Results of Operation for Cancer of the Breast." David W. Graham, Chicago.

(d) "Cancer of the Uterus." E. Mammen, Bloomington.

Characteristics. Necessity and possibility of early recognition. Diagnosis. Touch, inspection. Microscope. When Lymphatics not involved. Treatment. Palliative. Radical. Hysterectomy. Vaginal. Advantage and safety of

the procedure. Effect upon patient and results. Recurrence. Cases. Record in McLean County.

(e) "Geographical Disposition and Medical Treatment of Cancer." W. C. Bowers, Decatur.

The geographical distribution and the medical treatment of Cancer. Places of greatest prevalence. Places absent from. Real or apparent increase in certain localities. A few statistics. Treatment is according to whether recent chronic, superficial or deep, curable or incurable. Remedies for different phases and conditions of incurables.

(f) "The Starvation Treatment of Carcinoma." N. Senn, Chicago.

(g) "Further Investigation in X-Ray Therapy." Charles D. Center, Quincy.

A review of the cases reported to this society one year ago, with some additional ones used as illustrations.

The difficulty of telling before treatment whether benefit will follow application of rays or not. The re-iteration that more is claimed for the rays, therapeutically, than is justified; this claim arising from some apparently brilliant results which are not supported clinically by lapse of time.

An attempt to distinguish a type, or class, of persons easily burned by X-Rays.

21. "Indications for Surgical Intervention in Gastric Ulcer." A. F. Stewart, Oneida.

General considerations. Importance of early diagnosis. Hemoglobinaemia a constant symptom. Mechanical irritation of food. Under medical treatment prognosis dependent upon hemoglobin approximating the normal. Two prognoses in gastric ulcer. Relative indications for operation. Positive indications. Results following gastro enterostomy. Pylorotomy for tumor of pylorus. Conclusions.

22. "Some Practical Points in the Diagnosis and Treatment of Placenta Previa." Henry F. Lewis, Chicago.

Definition; marginal, partial and central. Main diagnostic point; hemorrhage during pregnancy; a dangerous sign and must never be passed over lightly. Signs by vaginal examination. Tamponade; pro and con; useful to gain time; In primipara nature may stop hemorrhage with head; less likely in multipara. Dilatation of os by balloon passed into uterine cavity; opened vessels thus pressed upon as fast as placenta is separated. Podalic version; Braxton-Hicks version; latter not feasible in central placenta previa; too rapid extraction to be avoided after ether; danger of deep tears and rupture. Caesarean section; cases adapted for classical or vaginal operation. After care; postpartum hemorrhage; sepsis.

23. "Ante Natal Pathology." C. E. Padlock, Chicago.

There is a fetal pathology which has for its etiology certain factors which could have been prevented.

Every case of pregnancy should be considered as an abnormal condition, requiring the advice and attention of a physician. A neglect to do this often means injuries to the fetus.

The fetus suffers from a hereditary taint, notwithstanding the possibility of such a condition being known by the physician and one or both parents.

The treatment: (a) preventive. (b) curative.

Preventive. Advice against marriage by those known to be suffering from any pathologic condition which would have an injurious effect upon the fetus.

Curative. Strict attention to the hygiene of pregnancy and treatment of the fetus through the mother.

24. "Porro Operation: Carl Wagner's Modification." Carl Wagner, Chicago.

(1) The modification consists in reversing the course of the operation. (2) Description of a simple way of full control of haemorrhage. (3) Indications for the operation. (4) Report of three cases. Recovery.

25. "Symphysiotomy in Persistent Mento-Posterior Face Presentation, with a Report of a Case." E. B. Montgomery, Quincy.

With the greater success of the Caesarian operation in contracted pelvis entailing a lessened mortality for both mother and child, the indications for symphysiotomy have become somewhat narrowed. In certain face presentation, however, in which in spite of all efforts at correction, the chin remains persistently in the hollow of the sacrum, a decided indication for the use of this operation is presented. Craniotomy is not indicated so long as the child lives, Caesarian section would be likely to be much more hazardous under circumstances such as are presented in an already somewhat prolonged labor. Symphysiotomy here commends itself as affording a chance to save the life of the child without entailing serious risk to the mother. In the author's judgment the lateral operation with the Gigli saw is best, not only on account of the ease of its performance, but on account of the lessened dangers from hemorrhage and sepsis and also on account of the speedier and more solid union of the separated parts.

Hammock suspension after the method described by Ayers in the *Journal of the American Medical Association*, vol. 38, page 645, and in the *American Journal of Obstetrics*, vol. 36, page 1, is not only more satisfactory, but indeed almost necessary in the after treatment of these patients.

The author was unable to find very much literature regarding the use of symphysiotomy in such cases, although all the text books on obstetrics express themselves favorable to its

performance. The author gives an abstract of the report of seven such cases, made by Pinard in Paris in 1902 and detailed account of his own case follows which was successful as regards the mother although the child perished from asphyxia shortly after birth.

26. "The Value of Systematic Blood Examination in Gynecology." Palmer Findley, Chicago.

27. "Why Digital Exploration Through the Internal Inguinal Rings Should be Made in Conjunction with Every Alexander Operation." Albert Goldspohn, Chicago.

(1) The surgical risk is not appreciably increased by passing an index finger through the internal (subperitoneal) inguinal rings, palpating the internal parts and liberating them, if required, in cases where the active infectious elements have died out. Nor is any liability to hernia created thereby; (a) because no additional cutting is required, these rings being large enough to admit an index finger very readily with or without a little innocent stretching; (b) because nothing less than a modified Bassini hernia technique should be employed in closing all these wounds anyway.

(2) Obscure anatomical and pathologic peculiarities about the adnexae and ligaments of even the non-adherent retroverted uterus, are of frequent occurrence and they greatly curtail the degree or duration of the good results of the simple Alexander operation, because the latter does not discover nor rectify the conditions.

(3) Thorough bi-inguinal shortening of the round ligaments via their natural channels has no real rival in: (a) the completeness and solidity of its anatomical foundation, (b) its most nearly ideal physiological nature, (c) its harmlessness and the durability of its good results—beyond subsequent labors.

(4) A procedure that is pregnant with the most useful possibilities for very many simple and complicated cases of retroversion in fruitful women, should partake of the development common to surgery in general and not be confined to the narrow and primitive technique of decades past.

28. "Cystic Tumors of the Ovary." Geo. W. Newton, Chicago.

Synopsis: Histogenesis, etiology, symptoms. Importance of early and correct diagnosis, emphasized by illustrative case. Accidents to and changes in ovarian cysts. Results from conservative treatment of follicular.

29. "A Unique Case of Imperforate Hymen." Charles B. Horrell, Galesburg.

Case a fairly rugged, rather athletic girl nearly sixteen. Bicycle rider, etc., and healthy, one where naturally an imperforate hymen would not be suspected, suddenly exhibits abdominal tumor size of six months gravid uterus. Examination revealed "title" and incision released about two quarts of grumous

black blood and perfect relief. To be gained by report, do not forget that though rare may occasionally be found.

30. "A Phantom or Model for Illustrating Herniotomy and Suture Work on the Abdominal Parietes." E. Wyllys Andrews, Chicago.

Importance of layer by layer suturing in abdominal wounds. Difficulty of showing all steps of the closure to large audiences. Students get inadequate notions of the real care necessary. Herniotomy can hardly be shown to more than eight or ten observers. Value of cloth in layers to imitate abdominal fascia. Parts almost perfectly reproduced in large size. Authors' radical cure of hernia demonstrated.

31. "Immediate Abdominal Section." Denslow Lewis, Chicago.

The opinion is concurred in that increased facilities for surgical work and the multiplicity of hospitals in country districts often induce practitioners to undertake important abdominal operations without proper qualification or adequate experience. It is conceded that the usual post-graduate instruction may be a means of advertisement for the instructor rather than an honest attempt to teach the student-practitioner the details of operative technique. It is also admitted that many of those in attendance for a few weeks at our post-graduate schools only too often seek a superficial knowledge of recent advances and a respite from their every day work and but few are actuated by a sincere desire to add to their actual surgical capability.

Nevertheless it is urged that under certain conditions abdominal section must be undertaken by the practitioner in charge for without such intervention the patient's life is jeopardized and in some instances the result is inevitably fatal. The principles of asepsis are simple and easily applied anywhere. The desirability of special skill and suitable surroundings become insignificant when the danger to life is imminent.

The author cites cases from his recent experience in ectopic gestation, appendicitis, obstruction of the bowels and other conditions where the demonstration has been made that immediate operation alone can save life.

32. "The Superior Sphincter of the Rectum." Robert Colyer Bourland, Rockford.

At least one permanent valvular projection is present in the internal wall of every normal human rectum, from 5 to 8 centimetres above the anus. As a rule it is located upon the posterior and right lateral wall of the gut.

It is extremely variable in size and occasionally presents a spiral arrangement.

Histologically the valve consists of a fold of mucous membrane, enclosing muscularis mucosa, a thickened sub-mucosa and a thickened mass of circular muscle fibres, which mass constitutes the characteristic feature of the valve, and is an imperfect expression of a third sphincter of the rectum.

This structure is probably without function, except in cases necessitating the division of the external and internal sphincters and. When it may become hypertrophied and exercise a definite sphincter action.

Pathologically, an hypertrophied rectal valve may act as a mechanical obstruction to the passage of faeces, may become ulcerated and is sometimes the seat of malignant growths.

33. "Use and Abuse of Drainage." J. N. Stealy, Freeport.

The purposes of drainage. The indications and advantages, as against the disadvantages and bad results of drainage. The present day inclination for less drainage. Is it justified? Conclusions.

PRELIMINARY MEETING.

According to the provisions of Chapter 9, Section 4, of the By-Laws of the Illinois State Medical Society, a preliminary meeting of members of the Society is called for 3 P. M. on Monday, May 15th, at the Illinois Hotel, in Bloomington.

This meeting is for the purpose of discussing all matters of Public Policy and any questions which are of interest or importance to the profession or the Society. The By-Law reads as follows:

"The Committee on Public Policy * * shall call a preliminary meeting of the members of the Society for the discussion of such subjects which may be presented, and shall report the recommendations of such meeting to the House of Delegates at its first meeting."

P. M. Woodworth, Chairman,
L. C. Taylor,
H. C. Mitchell,
Carl E. Black, Ex-Officio,
E. W. Weis, E-Officio.

TO MEMBERS.

The Passenger Associations have granted a special rate of one and one-third fare for the round trip to Bloomington for ALL persons attending the meeting. This special rate can be obtained ONLY by presenting a CERTIFICATE from the local ticket agent and having it certified at the Secretary's office at the meeting and signed by the railroad joint agent. Do not fail to ask for your certificates.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

MAY, 1904.

NEXT ANNUAL SESSION, BLOOMINGTON, MAY 17, 18, 19, 1904.

OFFICERS:

PRESIDENT—CARL E. BLACK, Jacksonville.

SECRETARY—EDMUND W. WEIS, Ottawa.

TREASURER—EVERETT J. BROWN, Decatur

EDITOR—GEORGE N. KREIDER, Springfield.

ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical
Specialties, Materia Medica,
Therapeutics, Etiology, Path-
ology, Hygiene, State Medi-
cine and Medical Juris-
prudence.

J. W. Pettit.....Chairman
Ottawa.

E. B. Montgomery....Secretary
Quincy.

SECTION TWO.

Surgery, Surgical Specialties,
and Obstetrics.

E. M. Sutton.....Chairman
Peoria.

R. W. Holmes.....Secretary
387 N. State St., Chicago.

Committee on Public Policy and
Legislation.

P. M. WoodworthChicago

L. C. TaylorSpringfield

H. C. MitchellCarbondale

The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

J. W. Pettit, Ottawa.

E. M. Sutton, Peoria.

The Pres. and Sec'y, Ex-Officio.

The figures before the names
of the Councilors refer to the
Councilor Districts.

The Council.

Term Expires 1904.

(2) W. O. Ensign, Rutland.

(6) L. J. Harvey, Griggsville.

(9) J. C. Sullivan, Cairo.

Term Expires 1905.

(8) H. C. Fairbrother, E. St.
Louis.

(5) W. K. Newcomb, Cham-
paign.

(3) J. F. Percy, Galesburg.

Term Expires 1906.

(7) C. Barlow, Robinson.

(1) M. L. Harris, Chicago.

(4) O. B. Will, Peoria.

The Pres. and Sec'y, Ex-Officio.

THE FIFTY-FOURTH ANNUAL MEETING.

On pages 914 to 921 will be found the Order of Proceedings and Section Programs of the 54th annual meeting to be held at Bloomington, May 17, 18, 19. It will also be noticed that the usual preliminary meeting will be held on Monday the 16th instant. A glance at the program will reveal the fact that a program of unusual merit has been prepared. In medicine the address will be given by that silver tongued orator, Wm. E. Quine. In surgery the address will be given by that tireless worker and experienced operator, Albert J. Ochsner. Besides an unusual number of good papers, there will be symposia on Tuberculosis, Eclampsia and Carcinoma, three of the live questions concerning the world of medicine and affecting the general public more than any other. We trust a large number of members will take advantage of the opportunity to hear a splen-

did program and at the same time visit one of the beautiful cities of the Prairie State.

ROBERT KOCH.

In 1882 announced the discovery of the bacillus tuberculosis. Klenke, Villemin, Cohnheim and Salomonsen had made important investigations before, but had not unlocked the secret.

Koch took tubercles from the lungs of animals, recently dead of the disease, crushed them on cover glasses and subjected them to all staining materials known to him in a vain endeavor to see the germ. Finally, by the aid of an alkaline solution of methylene blue, he succeeded in finding the fine blue threads. It was while endeavoring to make these threads clearer by a differential color reaction with Vesuvin that he found that the previously blue colored cell nuclei and other contents of the field had taken on

a brown color while the threads still retained the beautiful blue stain and could by this means be readily found in every specimen of tuberculous material.

The next problem was to secure this substance in a pure culture, free from any contact with bodily tissues. This problem Koch solved after endless care and patience, by the help of a new culture material.

The third step to cause the disease by vaccination of the pure culture of the germ, was now an easy task.

The splendid study was complete; not an item had been omitted and the discovery was announced at a meeting of the Physiological Society on the 24th of March, 1882. What a sensation was caused when it became known to the world that the most deadly of all diseases was infectious and that its cause had been discovered. Here was furnished the prospect of combatting the deadly enemy. Koch took up the task with energy, but was obliged to give it up. Cholera had appeared at the door of Europe. Every eye was turned to Koch for help and not in vain. Koch left the comforts of home and with his helpers journeyed promptly and without fear to Egypt and later to India, the home of the disease, and there succeeded in discovering the cholera germ to be a lively moving screw formed bacillus which when dried on the cover glass appeared like a comma, the so-called comma bacillus. His studies showed that the sick individual is the carrier, manufacturer and spreader of the germ. The result of Koch's discovery has been that Europe and America have been practically free of the Asiatic disease ever since. It is feared but little more than small pox.

As soon as possible Koch returned to the study of tuberculosis. He found that the bacillus could only propagate in a high temperature. It is absolutely necessary to dis-

infect the se and excretions of men and animals afflicted with the disease. Naturally it was best to endeavor to destroy the germ inside the body affected. After years of indefatigable study Koch announced that he had discovered in Tuberculin—the filtrate of cultures of tubercle bacilli in glycerin bouillon—an effective substance with which the early stages of the disease might be detected and even cured. This announcement was received by the profession and laity with unexampled enthusiasm. Koch's remedy was "boomed" by the papers in its usual extraordinary way. Patients in the last stages of consumption came expecting to be restored to health in a few doses of the wonderful remedy. Of course Koch had not said this, but when results were not obtained as expected, he suffered the penalty instead of these foolish friends, and from being the honored discoverer he became a much abused "quack" not only abroad, but in his own home, and still he only told the truth—a truth which still remains, viz—that tuberculin has proven itself the best means for diagnosing tuberculosis in its first stages. It has also been proven effective for healing tuberculosis in its beginning when used by careful physicians.

Koch, by the persecutions, was only stimulated to more activity. By long trituration in an agate mortar he pulverized the germs to the finest possible degree and this substance when dissolved in an isotonic salt solution, became a new Tuberculin, the so-called T. R. which possessed all the virtues of the old and something else. What that something else is has not yet been determined. It is evident, however, that the problem has not yet been solved along that line.

However, the value of Koch's studies on Tuberculosis does not depend on his finding an antidote. His other work has given the

key to successful combat against the great white plague. More time will be required, but the hygienic and sanitary reforms necessary to eliminate Tuberculosis will assist in eradicating other diseases at the same time. So rapidly is the death rate from Tuberculosis decreasing in Prussia that it is believed that by 1927 it will disappear from the list of diseases. What Prussia is doing other countries can and will do. The Illinois State Medical Society will have much to do with bringing this about in America.

THE TRUTH ABOUT SMEJKAL.

In the April issue of this Journal, pages 847-856, will be found a very interesting and enlightening discussion on the subject of "Graft" which took place at the February meeting of the Physician's Club of Chicago. To those members of the State Medical Society who re-call the circumstances of the defeat of the bill introduced into the 43rd General Assembly by the Legislative Committee the remarks of Mr. Darrow and Dr. G. W. Webster will be especially entertaining. A reference to that part of the discussion will show that Mr. Darrow asked Dr. Webster the following question. Isn't Mr. Smejkal, who was a member of the Judiciary Committee of the house, the attorney for the State Board (of Health)? To this Dr. Webster replied. No sir, Smejkal has nothing to do with the Board. He is not and has not been for a long time. Mr. Darrow then retorted. When the Legislature met he informed us he was. Dr. Webster finally replied he *was* formerly attorney for the Board, but *was not at the time of the meeting of the General Assembly*.

As Mr. Edward J. Smejkal resides in the same district with Mr. Clarence Darrow it is probable that Mr. Darrow had accurate information as to the employment of his

colleague. From the report of the Legislative voters League we take the following extract regarding Mr. Smejkal which would seem to indicate that while that gentleman may not have been entitled to the appellation of attorney of the State Board of Health, yet he did hold or does hold such close relations with the Board that he was probably correct in announcing himself and Mr. Darrow was correct in believing him an attorney for the State Board of Health. Certainly Mr. Smejkal's active opposition to the bill would lead one to believe that some powerful influence was lending encouragement to his efforts.

Copy of Report of Legislative Voters League.

Edward J. Smejkal (rep.), on pay roll of state board of health, resides 77 Bunker street; voted against bad amendments to civil service bill, except the one to omit certain officers from its operation; is not recorded as voting on Powers' amendment to city law; was active supporter of lawless house organization and fought enabling act, but finally voted for it when its passage was certain, and for charter amendment; opposed adding to investigating committee; introduced and pushed bill to allow "floaters" to become judges of election; an unsatisfactory record.—Chicago Tribune, April 11, 1904.

GOVERNOR YATES AND THE MEDICAL PROFESSION.

Governor Yates has apparently discovered that he is not popular with the medical profession. We believe he has misconceived the reason for this unpopularity and supposes that it is wholly due to his attitude on the bill creating a board of medical examiners which failed to pass at the last session of the general assembly. In this misconception

he shows the instinct of a politician and fails to appreciate the fact that his attitude on the above mentioned bill is only one example of the many errors he has committed in matters having reference to the learned professions.

To offset this unpopularity he has caused some one to issue a 24 page pamphlet entitled the Veto Messages of Governor Richard Yates affecting certain bills enacted by the Forty-third General Assembly of Illinois, 1903, viz. The Dental Bill. The Nurses Bill. The Embalmer's Bill. Who the some one issuing the pamphlet is could not be discovered from the pamphlet itself for it bears no date and there is no indication as to where it was printed nor by whose authority it was distributed. However it would not be difficult to trace the source of the circular. The industrious but over-worked secretary of the State Board of Health probably composed the "Introductory," an adjective erroneously used here in place of a noun. The same cunning hand probably inserted the often misleading foot notes which appear on pages 4, 5, 21 and 23.

Concerning the vetoes themselves it is unnecessary for us to speak since this whole matter was fully considered in the issue of the Journal of June 1903. The apparent attitude of the Governor and the Secretary and President of the State Board of Health was there fully discussed and the falsity of the premises upon which they appeared to have acted was fully shown. Subsequent events have gone a long way towards proving the truth of the statements there made. It will be well here however to acknowledge that an unintentional misquotation was made in that editorial. Quoting from several daily papers regarding the nurses bill we stated that the executive says. "Section 12 inserted by the State Board of Health

is so unwholesome that its necessity as an exemption is apparent to all." It is now claimed that the language of the veto was *wholesome* and not *unwholesome*. If an error was made we greatly regret it especially as it was and is unnecessary to say anything but the truth concerning the persons concerned.

We use the words apparent attitude of the Governor, advisedly because from the time he recommended, in his message to the 43d General Assembly, the passage of a law creating a Board of Medical Examiners it has been at all times a question as to just what has been the attitude of the Governor in this matter. The Governor told Chairman Black of the Legislative Committee that he was in favor of the Medical Examiner's Bill, would be glad to see it pass and would sign it if passed. Secretary Egan and President Webster claiming to be the spokesmen of the chief executive would as positively assert within the same 24 hours that the Governor was not in favor of the bill and would not sign it if passed. The "introductory" leaves us still further in doubt since diametrically opposite statements appear therein.

We regret that our space will not permit us to review all the interesting items which appear in this remarkable pamphlet. Its issuance is a great compliment to the medical profession since it is an acknowledgement of the power and influence of a large and respectable body of men who must now and in the future be reckoned with.

We regret also that space now also prevents us from giving some of the real reasons which have alienated the medical profession from the present chief executive. This we hope may be done in some future issue of the Journal.

Correspondence.

JACKSONVILLE, ILL., April 20, 1904.
Editor of the Illinois Medical Journal,
Springfield, Ill.

Dear Sir: I have read with interest the various articles appearing in the Journal on "The Needs of the State Institutions in Illinois," and I have read carefully the article written by Mr. J. Mack Tanner, Secretary of the Board of State Commissioners of Public Charities.

While I think it was perfectly proper and desirable to publish the article written by Mr. Tanner, notwithstanding its somewhat unreasonable insinuations upon the Journal of the State Society and the Society itself, these questions are very proper ones for discussion. At the same time I doubt very much whether the subjects can be discussed by laymen so as to be of much value to the medical profession.

The care and treatment of the insane is entirely a subject for the medical profession, and it certainly creates a smile when laymen assume to discuss such subjects as the desirability of internes, and competitive examinations for the sane; the advisability of women physicians in each hospital; the necessity or desirability of trained pathologists in connection with the state institutions; whether or not it is better to have male or female nurses in charge of male patients, etc., etc.

It creates a smile when laymen assume to discuss and settle problems which are purely medical. In fact I never could understand what the State Board of Charities could possibly do in connection with our state institutions any more than to see that cruelties were not practiced in care of patients, and possible to see that the funds of the institutions were properly used. Even in these matters the judgment and oversight of the Board of Trustees, Superintendent and assistant physicians, with their annual report to the governor of the state, is a far more reliable safe-guard to the patients than any committee traveling about the state, dropping in here and there just to look things over.

Things might be improved by having only one Board of Trustees for all institutions. This however is an open question.

The sooner the physicians of Illinois assume their true position in connection with all these matters the better it will be for our State. These are entirely medical problems, and can only be fully understood and appreciated by members of the medical profession. Much more could be accomplished by the appointment of suitable committees by our State medical associations to visit the state institutions and report back each year to the various state societies upon their condition and management. In addition our Societies should invite reports from the superintendents.

Something should be done to bring these state institutions into closer relations with the medical profession of the State. These are questions which our State Society can appropriately consider, and in which they can render the State invaluable service by assuming closer relations with the various state institutions, and by taking a more active interest in this important work. Insane patients are simply sick. They all first consult their family physician, and upon his advice are committed to an institution especially designed for them, where they are at once under the care of other physicians. Our profession needs to be brought closer to this work and to give more active support to the various superintendents in their work. Provision should be made for the better training of medical students and graduates in the subject of insanity and the care of the insane. One thing much needed is a more active and thoughtful interest and support of these institutions by the members of our profession.

Very respectfully,

Carl E. Black.

GALESBURG, ILL., April 18, 1904.

To the Editor:

I have gone over the matter of the editorials referred to in your recent communication, together with the letter of Mr. J. Mack Tanner in reply thereto. I see nothing in the editorials that is not in every way to be commended; and on the other hand,

I see no reason why the comments thereon by the Secretary of the Board of Public Charities should not have been published.

The editorials are a plea for this State to get in line, or ahead of the line, in the management of its state institutions. The letter of Mr. Tanner is a statement to the effect that no improvement is necessary. His covert suggestion that he does "not understand the purpose of the editor of the Illinois Medical Journal, or his sudden interest in the charitable institutions" must be interpreted in the light of the well known sensitiveness of all of the present state officials to criticism. But little, if any, attention need be paid to it. All that any of us want for our state institutions, including Mr. Tanner, is better results; and the subject is so big that it is not necessary to throw mud or answer in kind.

The letter of Mr. Tanner is a subtle production. It is evident that he seeks to thwart further full discussion, by using the names of those physicians at present in the employ of the state. We all know that some of these men are all right, and we also know that others are utterly incompetent, except as politicians. But unfortunately there is not enough leaven to permeate the mass.

Again, Mr. Tanner assumes that the methods suggested in the editorials for the improvement of the service in our state institutions, has in the past had a full and fair trial. We all know that no method that had in it even the hope of permanent good results (in all that that implies) for our state institutions, has ever had a fair trial. It seems to me that so much can be said against the whole present (lack of) system in answer to Mr. Tanner's letter, that nothing but good can come from it. My own idea would be to give Mr. Tanner's views the widest circulation and then write a comprehensive editorial actually showing up things as they are, with suggestions for their improvement.

I can readily understand why Mr. Tanner does not want "to make the fifty thousand relatives and one hundred thousand friends of the ten thousand inmates of these institutions, believe that the inmates were deprived

of the treatment and care due them, and that the administration was responsible therefore." But to cry "peace, peace" when there is no peace, is neither good for the state board of charities, nor for us.

I can readily understand how Mr. Tanner can honestly believe that everything in our state institutions is just as it should be. He has had no training in the work for which he is engaged, and if we can help teach him, only good can come from it if he is to retain his present position.

Trusting that I may have added a little in the way of suggestion on the questions considered,

I remain, sincerely yours,

J. F. Percy.

OTTAWA, ILL., April 20, 1904.

My dear Doctor:

I have just read the Tanner letter and hasten to give my opinion on the questions at issue.

I see nothing in Tanner's letter that is objectionable. First, because it is in a measure an apology for the existing state of affairs, and second it in detail admits the contention or contentions of Miss Lathrop. His personal conclusion does not affect the general subject, and his criticisms of the opinions of Miss Lathrop are his own and are worth only as much as they may influence others, but I do not believe these opinions will carry any weight whatever with medical men. I am also in favor of the full and free discussion of medical topics with the laity, and I cannot see any harm that can possibly result from the publication of this letter; but on the contrary a great deal of good may come from the concentration of opinion of those medical men who are interested in this subject urging them to a greater exertion for the corrections of evils existing. This is just the point that we are striving for in our society work, and I believe that this subject should be given all the prominence it deserves. The fact that the Tribune has commented upon this editorial shows that an impression has been made, and as you know the people must be educated before expecting any departure from the ordinary, and this surely ought to

prove good schooling. I believe, Doctor, that you can handle this subject without fear of any unjust criticism from the Society, because you are in a position to deal with it from the standpoint of a critic or spectator; as you have given the required credit to Miss Lathrop, and she is a woman I know who is well able to take care of herself. I believe this entire matter should be left to the wisdom of the legislature urging them and insisting upon a commission, but whether sufficient pressure can be made in the next decade is a question that is problematical. But you know what our method has been, that in spite of defeat to keep hammering away just the same in the matter of education and we can be proud of the successes we have attained.

I am inclined to think that the majority of the Councilors will agree with me although at the present time they may hesitate in the view of the difficulties we have experienced in our work with the State Board of Health. The pendulum may perhaps swing too far to the conservative side, but I am sure that the impressions held on all the articles in question, as well as the letter will finally force them to the conclusion that no harm can result but much benefit will follow the publication of this letter. I say let the good work go on. It makes good reading matter, it stirs up an interest, it puts both sides on their metal and perhaps "Manchuria may retain its administrative entity."

Yours sincerely,

E. W. Weis.

OTTAWA, ILL., April 20, 1904.

My Dear Kreider:

Secretary Tanner seeks to dodge the main issue by discussing a question of minor importance, viz.: the advisability of appointment of internes. Taking the narrow view of advantage to the particular institution in which interne serves, there is some reason for his position. Taking the broader view that the knowledge thus gained is of value to the body politic, his argument falls to the ground. In view of more glaring defects in the present system, the discussion of this

question, or the ability of those in charge, is too trifling to occupy your time or space.

Here are a few facts which I know to be true and are the basis of the evils complained of.

The trustees and superintendents while nominally in control are not in fact. The law says the trustees shall appoint Supt. As a matter of fact the Governor makes the appointment not only of the Supt. but every other official whose place is worth anything. He does not even make the appointment according to his own judgment, but at the dictation of his political henchmen who know nothing and care less for the real interests or purposes of the institution. Every employe from Supt. down, knows that his term of office depends upon his political activity and usefulness and when these are at an end he is either asked to resign or made so uncomfortable he does not care to remain. I know whereof I affirm when I say that the trustees are mere figureheads and except in carrying out the details of the work of their respective institutions the Superintendents are also. Herein is the main difficulty and the basis of the whole evil—the officials are appointed because of their political influence and more especially because of their interest in and activity for the Governor to whom they owe their appointment. They are thus forced to pay more attention to politics to retain their positions than in performing well their duties to the State. How does it come that heads of institutions are just now engaged in active political work in securing the nomination of Gov. Yates, if not to hold their positions? Does anybody who has been a close observer believe that any of them could hold their positions if they failed in this particular, or could be ousted however, incompetent, if Gov. Yates is renominated? The facts are the whole system is wrong and will be until established on the firm basis of civil service.

Keep up the fight and don't let them sidetrack you by getting away from the main issue. By all means publish letter, but don't fail to show that there is nothing to it but chaff, and either emanates from one who cannot rise to the importance of the situation

or if he does is trying to cover up the real issue under a multitude of words. Be sure and let your editorial accompany Secretary Tanner's letter, so that the emptiness and insincerity of it may be brought into stronger contrast with your position which is absolutely correct. You can say with truth, "let the galled jade wince, my withers are unwrung." You are making the Journal a power for good by discussing live practical questions. Go on and don't let up because once in awhile you may get a return blow. All aggressive men must expect that.

Let us keep clearly in mind that those now responsible for the conduct of our charitable institutions are, like the patients and public, the victims of a vicious spoils system. They are powerless to change the system. This can be done by a healthy public sentiment which is rapidly forming and will soon make itself felt. The present officials are not wholly responsible for the system. They are only culpable for defending it.

Yours truly,

J. W. Pettit.

PEORIA, ILL., April 20, 1904.

To the Editor:

I have re-read with critical care the articles in the Journal, as well as that of Mr. Tanner. Respecting the former, I can only say that while exception might be taken to delegating the formulation of professional opinion to a non-professional, the fact remains that the articles referred to probably reflect with as great accuracy as any could the position of the profession generally respecting the features of the subject of which they treat. Certainly the sentiments therein expressed agree with my own, and with those of my acquaintances in so far as I have been able to ascertain.

I must confess that I cannot see in the editorials any cause for grievance. They contain a plain, frank, non-partisan view of the situation. But, since Mr. Tanner feels that there is call for his statements, and since they contain nothing objectionable, I should certainly publish them in order to throw on the subject all the light possible, and as an evidence of good will. While the

former articles seem to represent the consensus of professional observation and thought, we should be always glad to have errors of either fact or judgment pointed out, and to that end welcome all succinct statements having such bearing. Our object should be to arrive at the truth respecting matters of Institutional conduct, and especially those phases having so close a relation to professional honor and success. Our object should be to place responsibility where it legitimately belongs, and aid all expedient methods for betterment. I hope in the near future to have something more specific to communicate on this topic.

Faternally and sincerely yours,

O. B. Will.

ONE HEAD TO AN INSTITUTION.

ANNA, ILL., April 13, 1904.

To the Editor:

So long as politics plays the star part in the management of the State Institutions there cannot be the highest standard of efficiency. When I say this I do not mean to reflect in any way upon the gentlemen named in Mr. Tanner's article. I know several of them personally and have the highest regard for them. But no matter how wise and efficient one may be he cannot succeed in any undertaking when he is handicapped by outside interference.

In conducting a hospital the Superintendent cannot do the actual work; he can only direct affairs. Consequently he must depend upon a large force of subordinates; and when these subordinates are appointed because the Governor or a member of the Legislature or a Trustee or someone else wishes to pay a political debt or strengthen his political fences, then the matter passes entirely out of the hands of the Superintendent, and many times he has to put up with employes he wouldn't consider for a moment if he were conducting a private enterprise.

Mr. Tanner says he believes there should be but one head to an institution. I agree with him.

The Superintendent should be appointed because of his fitness; his knowledge of the

work, his honesty and integrity. Then he should be allowed to choose his medical staff and the heads of departments and subordinates. He should be entirely let alone from any outside interference. He is on the ground. He knows what is best to do. If he doesn't know he never should have been appointed.

But under the present system there are a score or more heads instead of one directing the affairs of an institution. The Governor says who shall compose the medical staff and fill other important positions, while the Senators and Representatives and Trustees and "Bosses" say who shall have the other places. Hence the Superintendent has very little to say about it, and whether the material sent him to assist him in the care of the unfortunates is good, bad or indifferent he has to put up with them as long as he can. It does not matter whether this system conflicts with his ideas of good management and economy or not; that is not the point.

Who gets the worst of it in the end? The patients.

Samuel Dodds.

CHICAGO, ILL., April 17, 1904.

To the Editor:

I have just looked over letter and have made a marginal note or two. Evidently somebody feels himself hard hit. I involuntarily smiled over the statement that the writer did not understand the purpose of the editor and of the Illinois Medical Journal, or his sudden interest in the charitable institutions. Surely it has been obvious to many others, as it has to me, that politicians not only have no unselfish interest in the charitable institutions of the State, but are entirely unable to comprehend the existence of such interest in others.

The statement of Mr. Tanner concerning the internes is full of inaccuracies, which I shall not now take time to point out. I was Secretary of the first Examining Board which was organized by the State Board of Charities under the authority of Governor Altgeld. Dr. Boerne Bettman, then President of the State Board of Charities, was particularly active in the movement, receiv-

ing every assistance from Miss Julia Lathrop, at that time, I believe, Secretary of the Board.

Very sincerely yours,

H. T. Patrick.

CHICAGO, ILL., March 15, 1904.

To the Editor:

I have read the communication from the office of the Board of State Commissioners of Public Charities and am pleased that this communication of the Secretary has been published. I do not know myself any way we can, with the present state of public sentiment, secure a non-partisan administration of our Public Institutions. If Yates is re-nominated and re-elected, I have no doubt the present condition of things will be continued. I am sorry that I do not see any way of correcting it at this time.

Yours very truly,

D. R. Brower.

State Items.

Dr. W. Jay McClintock of Illiopolis has located in Springfield.

Dr. Jennie Shipp left Petersburg recently for Oklahoma and intends to take up her permanent residence there.

Dr. Henry J. Burwash, 721 N. Hoyne ave., Chicago, was sued by Mrs. Eliza Jessen to recover \$10,000 she alleging that a post-mortem examination was made without her consent upon the body of her son, August Jessen, who died in St. Mary of Nazareth hospital.

The local Board of Health of Carlsruhe, Germany has issued a warning, printed in the daily press, warning the citizens against the "Inter-state Department of Health" in Chicago, which is sending circulars claiming to cure all the diseases in the calendar. Treatment is by letter and with medicine, only costs from six to twelve dollars.

Grown Careful.

An Atchison man once recommended a doctor to a sick friend. The sick friend died, and his widow sued the Atchison man for damages. The Atchison man is not recommending any doctors now.—Atchison Globe.

Big Judgments for Personal Injuries.

Three judgments for personal injuries were sustained by the Appellate court. In one, the Illinois Central company is directed to pay James F. Swift, a carpenter, \$20,000. He was injured when a piledriver fell over in construc-

tion of a railway bridge across the Illinois river at LaSalle seven years ago.

The United States Brewing company was directed to pay \$5,000 to Henry N. Stoltenberg, as administrator, for the killing of John F. McHale, 4 years old, run over by a brewery wagon at Leavitt and Huron streets in 1901.

A judgment for \$10,000, obtained by Charles La Pointe, a sign painter, against the Gunning system, was sustained. He fell while at work

in 1901 and alleged he was not properly safeguarded.

For the loss of an arm a jury in Judge Walker's court has awarded John Marinar, a switchman against the Chicago and Northwestern railway, damages of \$6,800. Marinar fell in front of an engine at Mayfair in 1900.

Peter Cerovitch of South Chicago, who says he contracted "miner's asthma," in an explosion of dust in a coal mine at Pawnee, Ill., in 1902, has sued the Victor Coal company to recover \$20,000.

County and District Societies.

WINNEBAGO COUNTY MEDICAL SOCIETY.

Regular meetings are held in Rockford on the second Tuesday of each month. Membership 56

Officers.

President W. B. Helm, Rockford
Secretary C. S. Winn, Rockford
Member Com. on Legislation... D. Lichty, Rockford

At a meeting of the Winnebago County Medical Society held at Rockford April 12, 1904, the following paper was read by Russell Broughton, M. D., of Rockford:

Alcohol as a Toxic Drug.

Twenty-five cents will buy at a drug or grocery store, a package of herbs with printed directions, to make an infusion, with five gallons of water, to which add four pounds of sugar and a small amount of yeast; strain and bottle while hot, cork securely, and keep in a temperature of about seventy degrees for three or four days, then place on ice. The root or herb beer is then ready for use, and is, a three and one-third per cent alcoholic liquid.

When thus prepared, the liquid contains, in addition to the alcohol, any soluble matter in the material used, that does not take part in the fermenting process, this gives the drink flavor, or it may medicate it, but it has nothing to do with the production of the per cent of alcohol; any more than would a page from a book on Natural History or a handful of hay.

This method of preparing fermented alcoholic drinks, dates back to earliest history. The safety in the use of them, is in proportion to the innocence of the material used, other than sugar, starch, and water, and the small amount of alcohol, they contain. This varies from three to fifteen per cent; while distilled liquors, such as brandy, whiskey, etc., have a general average of about fifty per cent.

Distillation was unknown to the ancients. It is recorded, that they were large consumers of fermented drinks, which were then, as they are now, used as a part of religious ceremony.

The foundation of scientific physiology was laid about fifty years ago, when Professor Huxley and his co-workers made their study of the function of cells, and not much was done previous to 1855, in the scientific research of organic and chemical physiological science.

Great progress has been made since then. Alcohol has played a very important part in

chemical research, and does yet. The great demand for its use in various ways, calls for improved methods for its production. Ethyl Alcohol, from grain distillation, is a most important and useful one in domestic use, and the only one to be considered at present. Other forms were unknown until about 1828. Since then, about one hundred and forty kinds have been discovered and demonstrated.

Oxygen, hydrogen, and carbon, in the proportion of C, H, HO; constitute alcohol. It is

2 5

well in this place to note that alcohol contains no Nitrogen.

The natural sources of alcohol are starch and sugar. They exist in various plants. If alcohol is pure, it is the same from whatever source it is derived.

Government tax was paid on 104,804,651 gallons of distilled liquors in 1902, and on 44,478,832 barrels or 1,401,103,208 gallons of fermented liquors during the same year.

Eighty-eight per cent of all Ethyl alcohol is swallowed by men. It passes with little chemical change, to form a part of the blood current, and is distributed rapidly to all parts of the body that are influenced by nutrition.

The general effect when brought in contact with healthy or physiological tissue, is to render the same abnormal or pathological. The first effect is irritation, producing molecular activity, increasing surface temperature with a feeling of surface warmth, followed by a loss of heat and motion, oppression, stagnation, exhaustion and auto-intoxication.

Alcohol is toxic to normal tissue. It interferes with metabolism and nutrition, first increasing, and then lessening, tissue change.

The small amount swallowed in the mildest wines or other fermented drinks, is just as disastrous proportionately, as a larger amount taken in distilled liquors.

The most important and characteristic pathological action of alcohol, is that of a cellular poison.

Alcohol, being a product of death and disintegration, is not normal to living tissue. Fermentation is the work of micro-organisms called bacteria, and can be divided into two

groups: one maintains life, the other produces death and dissolution into original elements.

Alcoholic fermentation belongs to the latter group, because it can not be obtained from any living organism, substance, or chemical compound containing life. Death and decay being necessary preconditions for its production.

Since there is no line of demarkation between the traditional, so-called, innocent, beneficial effects of alcohol, when taken into the body, on the one hand, and the very bad and visible effects in the continuous use of it, on the other, one can only conclude for its non use at all times, except it be for a condition caused by a previously used toxic, or for toxine poisoning.

With little or no thought that a drinking man might be an ill one, good men and women have been praying in vain for him during the last half century, in every civilized community, and during that time one-half of all arrests have been for drunkenness.

The method of arrest is not the mild and easy one, such as is employed in apprehending the bank wrecker, bigamist, or the man who burns his store for the insurance. When narcotized by the powerful poison, alcohol, the unfortunate man may be clubbed into insensibility, bundled roughly into a wagon, and carted to jail to occupy the poorest of its accommodations, often without heat, or bed, with little or no attention, until the effects of alcohol are sufficiently passed to enable him to appear at the bar of a justice. With no defense, too ill to make one, he, in a dazed condition, helplessly accepts the situation and fine, enduring his suffering in defiant silence.

Were another man equally ill from fever or any other cause, he would be carefully conveyed to his home, or to a hospital, physicians summoned, trained nurses employed, and the sympathetic public would anxiously read about his case in the daily papers.

Evidence that it produces disease, is constantly before us. Nearly all families suffer from it. One-tenth of all the deaths in this country, are remotely or directly caused or hastened by its poisonous effects.

Surgeons expect twenty-five per cent better results in operations on non drinkers.

Eighty per cent of all moderately hard drinkers who have pneumonia, die during the first week of illness.

A very large per cent of children born to inebriate women, survive not more than a few days. If the woman be a constant and hard drinker during pregnancy, the child is poisoned by alcohol, and is born a drunkard. This condition of affairs is no argument to advance that drunkenness is hereditary; it is not. Twenty-three per cent of drunkards are children of non drinking parents.

Man to be just must be generous to the unfortunate.

Disease is a morbid physical condition, a deviation from health, or the normal condition of any function or tissue of the body, and it is caused by traumatism, toxines, (parasites)

or toxics, such as arsenic, quinine, opium, alcohol, etc.

Medical literature is nearly barren of information on the latter subject. But four pages are used in the discussion of alcohol, in a late standard book, of one-thousand pages, on the practice of medicine.

One and one-half degrees of body temperature above or below ninety-eight and three-tenths, Farenheit, call for medical attention.

A temperature of one hundred and six, is a dangerous one, and but few people recover with an additional degree.

A reduction of three or four degrees from the normal, places the person in a very dangerous place.

Alcohol reduces the temperature of the body in proportion to the amount consumed and absorbed. During the sedative stage of its effect, the temperature may be as low as ninety-six degrees, or lower. It may be two or three below normal in active delirium from wine drinking.

Full strength alcohol, constantly applied to any portion of the body, as, for instance, the finger, will cause necrosis of the tissues, followed by sloughing.

By reason of the strong affinity between alcohol and water, the fluids, of different specific gravity, mingle by the process of osmosis.

The soft part of the exposed portion becomes hardened or pickled, vessels constricted, and nerves paralyzed.

Nearly all alcohol taken into the stomach, is soon absorbed with slight dilution, and quickly finds its way to the liver, first acting as it always does, as an irritant, later, as a sedative. It produces stasis and engorgment, increasing the size of the organ.

Enlarged liver is found in the early stages of nearly all constant drinkers.

In some cases during the enlargement the liver becomes fatty. This condition is very common in wine or beer drinkers.

In drinkers of gin, whiskey, or brandy, the liver may, and very often does, after a period of enlargement, by an interchange of water and alcohol, become permanently contracted. This condition is known as "gin liver."

Men addicted to the use of alcohol, are more liable to chronic degenerative troubles, such as fatty liver, heart, or kidneys, and are more liable to acute diseases, from which they are less likely to recover.

The stomach gives its share of trouble to the alcohol consumer. Marked changes are brought about in its construction. The blood vessels become permanently distended with blood, thus interfering with good circulation, and nutrition. A pronounced cause for chronic gastritis and ulceration of the stomach.

The drink crave does not depend exclusively on the chemical properties of alcohol. It is partly caused by the avidity with which alcohol absorbs water from the tissues.

A certain effect or feeling is produced by taking alcohol or other toxic drugs. When the

drug used, has exhausted itself, been broken up or eliminated from the system, its narcotism is gone. A feeling of lassitude supervenes, which, if no more is taken, gradually passes away, and the functions of organs are re-established. Should another dose of the same be taken to overcome the bad effect produced by previous doses, and this repeated several times, a habit is formed. Habits are formed in no other way.

In a short time larger doses would be required to produce the same effect, which doses must be increased from time to time.

In view of the different pathological effect brought about by the continued poisonous effect of alcohol, it seems proper to class it as the cause of a disease, which disease has a definite pathology, which condition is capable of being understood and described, as is the pathology of Typhoid Fever, Erysipelas, Pneumonia, etc.

It is estimated that at least nine billions of cells belong to the nervous system and brain of man.

A child has as many normal cells at birth as it ever does. The average expectation of the life of a cell in the nervous system, is about thirty days. Cells multiply by division, one producing one of its kind, only, the parent ceasing to live, the new one taking its place to do cell work about a month.

These cells, like other cells in the soft parts of the body, are closed sacks, filled with fluid named albumenose, formative material, or protoplasm, resembling in appearance the white of an egg. It is, or should be, the finest material in the body, but it is good or bad protoplasm as we make it by the material we furnish for its manufacture.

The human body in health is composed of about nineteen distinct elements. If what we eat or drink contains these elements only, and in proportion, and in such form and quantity that they can be broken up in the process of digestion, the cells of the body will be supplied with good protoplasm. But if poisons that are in solution, or are soluble in the fluids of the body, are swallowed, confusion follows, if they pass to form a part of the cell contents.

The quality of cell protoplasm then depends upon the quality of the material furnished. None can be good that has a per cent of alcohol or other poison mixed with it.

The essential portion of food thus vitally prepared, passes by endosmosis to fill the cell wall.

Changes necessary to the continuance of man's existence, are constantly going on, at this, the very central point of life.

The molecules, composing the contents of the cell, have constantly in health, a regular, rhythmic and definite motion, receiving as needed, the necessary supply of force and heat producing material, from the blood current, to take the place of combustion and of wasted energy.

A physio-chemical process is going on in this the most wonderful of organs, by which dead material is converted into live tissue, and living tissue into dead material, waste matter or

debris of the body, which by exosmosis, in due time is eliminated. This whole process is nutrition and metabolism.

In each cell is a small dark spot called the nucleus, and a less dark one, called nucleolus, which, theoretically, have to do with the birth of another cell.

Heat of the body and body strength, can only be maintained by proper assimilation of food that has passed through catalytic process of digestion.

But little alcohol is broken up in its passage through the body, in its elimination in various ways. Nearly all goes through the blood current, and much of it becomes a part of the contents of the cell.

It is well known that alcohol coagulates albumen. The experiment is easily done.

Put a fresh egg in a clean four ounce bottle. Fill it with ordinary alcohol, shake thoroughly, and the white of the egg will be coagulated very quickly.

The white of the egg is the purest specimen of albumen easily seen in nature. It is a very coarse material as compared with protoplasm.

One can easily understand what effect even the diluted alcohol must have on the very sensitive life sustaining material.

The first effect is to create a disturbance with the molecules, producing confusion, disturbing continuity of thought, motion, temperature, and co-ordination.

Stasis follows, and there is an appreciable semi-coagulation of the albumenose in proportion to the per cent of alcohol absorbed, and a slowing of molecular movement of the cell contents.

As a continued evidence of the poisonous effects of alcohol, sixteen per cent of all drinking men suffer serious illness or injury, directly caused by it alone.

Thirty-nine per cent have chronic catarrh of the nose and throat.

Thirteen and one-tenth per cent, by examination, disclose well marked bronchial rales.

One per cent have well marked and abnormal dullness over some portion of the lungs.

The circulatory system is effected as follows:

One per cent show well marked symptoms of fatty heart.

Twelve per cent enlarged heart.

Ten and eight-tenths per cent exhibit valvular murmur.

Thirty-six and nine-tenths have weak pulse, which the so-called stimulating effect of alcohol will not overcome.

Atheromatous condition of the arteries is indicated in four and eight-tenths per cent of alcohol consumers.

Derangement of the liver is in evidence in nearly every drinking man.

In forty per cent there is a fixed increase in the area of dullness, while in five and one-

tenth per cent, the liver is apparently contracted.

In two-tenths per cent there is unmistakable evidence of cirrhosis of the liver.

Morning sickness is an accompaniment of twenty-six per cent of all constant drinkers.

Twenty-three and five-tenths per cent of all drinkers have tenderness of the stomach, probably as a result of gastric catarrh.

Eight and nine-tenths per cent have enlarged spleen, and twelve per cent, alcoholic cachexia.

Defective vision, not as a result of advanced age, is found in seven and eight-tenths per cent, and nine and two-tenths per cent suffer from hemorrhoids.

One and one-half per cent show well marked alcoholic wrist drop.

Alcohol is the most common cause of polyneuritis. This disease is progressive with the drink habit. Its course is usually suspended with a cure of it, and four-fifths of the cases rapidly recover.

The preceding and following statements are based upon the middle stage of a drinking career, the one through which nearly all drunkards are passing who apply for relief by a course of medical treatment.

If the drink habit is broken nearly all associated diseases, without lesions, caused by the toxic poison disappear.

One-third of the one hundred and forty thousand insane persons in public and private asylums in this country, were free minded and sane persons, until poisoned by alcohol or some other equally potent or toxic drug.

Insanity is an acquired condition never transmitted from sire to progeny.

Forty-three per cent of all the inmates in the Bengal, India, insane asylum, were made insane by one poison, Hasheech.

Toxic drug using, of all kinds, is increasing each year.

During the period that the population of Illinois increased fifty per cent, insanity increased six hundred and sixty per cent, and one-third of the insane were alcoholics.

In two per cent patellar reflexes are absent, in twelve per cent the same are weak, in twenty-one, they are exaggerated.

In thirteen per cent pupillary reaction is sluggish.

These statistics are the summing up of thousands of clinical cases from actual records kept. From the same, six per cent showed pus in urine, two and one-half per cent, hyaline or granular casts; and in ten per cent, the urine was albuminous. Forty per cent complained of pain in the back, in the region of the kidneys.

Nearly all of these kidney troubles disappear after a cure of the drink habit, which removes the cause.

MORGAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Jacksonville the second Thursday of each month.
Membership 40.

Officers.

President.....F. P. Norbury, Jacksonville
Vice-President.....T. W. Hairgrove, Jacksonville
Secretary.....D. W. Reid, Jacksonville

The Morgan County Medical Society met in the library, President Norbury in the chair. Present 13 members. The treasurer was instructed to forward to the state treasurer balance due from members of this society, paying on the basis of \$1.50 for each member of the society resident in Morgan County who has been a member for three months.

After reports of cases the following papers were read: **Case of Tubercular Laryngitis**, B. S. Gailey. **Influenza**, Allen King. **Complications of Influenza**, David Reid and A. L. Adams. •

Complications of Influenza.

David Reid: I know no other disease unless it is typhoid fever that has so many and so powerful accomplices in its attack upon human life as Influenza.

It is often open to controversy as to whether we should call a certain development of the disease a complication or a manifestation of Influenza.

We do not know, always, whether the invader by undermining the patients strength, simply opens the door to his more powerful coadjutors, or whether the bacillus of influenza, invading new and unusual territory becomes exalted, as Roger expresses it, and adapting itself to new conditions, sets up the inflammations and pathological changes peculiar to these tissues.

For instance, it is known that there are several species of micro-organisms that when they attack the lung cause pneumonia; when they exist in the joints they produce articular rheumatism. They may attack the heart, the pleura or the peritoneum, setting up the characteristic inflammations of these tissues. So it is probable that many of the so-called complications and sequences of influenza are only different kinds or forms of the disease.

Foremost among the complications of influenza both in frequency and fatality, stands pneumonia, especially when associated with advanced years.

Pneumonia stands in the relation to influenza of chief executioner. Some years ago, when lagrippe first made its appearance as an annual visitor in this country, there was a great mortality among the aged. Thousands of deaths were accredited to lagrippe that should have been called senile pneumonia. I believe that most, if not all the fatal cases of what is generally called influenza are complicated with pneumonia.

Pneumonia as a complication of influenza is more largely confined to those past middle age, and influenza pneumonia differs little from the ordinary type of the disease except as it is modified by the element of age.

Senile pneumonia, always more or less pre-

valent and fatal in the winter months is especially so in years like the present, when associated with influenza. It is one of the early accompaniments of the latter disease. It can hardly be called a sequence like some of the deep-seated rheumatic and neurotic affections that may truly be called *sequellae*, and in the aged is not always easily recognized.

In old age the symptoms of pneumonia are rarely so marked as in younger life. The pneumonia is often insidious in its beginning. A pneumonic flush is often the first objective symptom noticed. A senile pneumonia may be mild in all its symptoms and still be fatal. The chill if present is rarely severe, but a chill in an old man generally means pneumonia, especially if associated with influenza. Pleurisy is frequently absent. Temperature is rarely very high; cough may be slight or absent, and little more than an unusual prostration observable. I have seen an old man out shoveling snow this winter, till he dropped exhausted and delirious and had to be carried to the house with a temperature of 103, when the family did not know he was sick.

I have seen a number of cases this winter where the "grippe" in old men and women reached the point where the doctor was thought necessary, and where an examination would show a temperature of 101 or 102, with decided signs of a commencing pneumonia, yet when the patient was put to bed the temperature would fall to normal in from 1 to 3 days, the congestive pneumonia would disappear, and the physician would doubt his own diagnosis, yet the great prostration, and the long and slow convalescence, seemed to at length confirm his first impression. From a number of such cases, I believe that while pneumonia in the aged is usually more fatal than in young life, that there is still a form of pneumonia associated with influenza of the aged where the febrile symptoms are never well marked after the first day or two, where the physical examination fails to show anything more than a suspicious congestion, where the patient gradually but slowly recovers his strength, and where even a rather skillful diagnostician may never be able to verify the provisional diagnosis made at the time of his first visit.

Loomis said years ago, "senile pneumonia may run its course without expectoration, dyspnoea, flushed face or physical signs. When an old person has a slight rigor, followed by a febrile movement attended by great prostration for which there is no explanation pneumonia may be suspected though all other symptoms are absent." And to this I would add that it is no proof that our diagnosis is incorrect should the patient recover after a long convalescence.

So much for pneumonia. Among other complications of influenza as I have seen them this winter, aside from the customary catarrhal symptom, the nervousness, the acute spell of vomiting; the prostration, the aching, etc., that constitute the disease *per se*, I may mention several cases of persistent acute or sub-acute rheumatism, others of neuralgia, intermitting as regularly as a quotidian intermit-

tent fever, and yielding to quinine. One case of persistent neuralgia of both heels. One patient still lying prostrated by a sciatic neuritis. One just recovered from herpes zoster. Two cases of very grave facial erysipelas, and two cases still in hand, of persistent and severe vomiting with emaciation.

In connection with this mention of erysipelas, you will recall a series of cases of facial erysipelas following influenza at the Central Hospital for the Insane, reported last month in this society by Dr. Crouch.

As to the deep seated neuroses that writers tell us of, I have had no experience in the present epidemic.

In closing, I simply mention what I consider, after pneumonia, the most frequent and important of the complications of influenza. Otitis Media, which forms the subject of another paper by Dr. Adams.

Ear Complications in Influenza.

Dr. A. L. Adams, Jacksonville: Of the various forms of influenza, the catarrhal and nervous varieties only, result in disease of the ear.

The otitis of influenza, due to the influenza bacillus, is usually an involvement of the middle ear, and from there often extends through the antrum to the mastoid cells. It is the result of a migration of micro organisms, from the nasopharynx by way of the eustachian canal to the middle ear.

These micro-organisms, are the influenza bacillus, described by Pfeiffer and Kitasato, and often associated with the pyogenic cocci, and the pneumococci. These infections account for the great variety of symptoms in various cases.

Almost invariably the affected ear is, or has been, the seat of some inflammation which may have been quiescent for a long period of time.

In some cases the disease is limited to the tube, in others to the tube and middle ear, but frequently the mastoid cells are involved also. The upper portion of the tympanic cavity presents a very favorable site for a purulent inflammation, because of the presence of considerable connective tissue which supports the mucous membrane and with the ligamentous bands holds the ossicles in place. Inflammation of the middle ear is one of the most frequent complications of influenza. Holt places it as second in frequency among the complications of this disease in children.

Previous to the epidemic of influenza in 1889, there were annually from twelve to twenty cases of mastoid disease in the New York Eye and Ear Infirmary, while in 1897 there were one hundred and sixty-one mastoid operations in the same hospital.

Moos describes four varieties of inflammation of the middle ear as a result of influenza.

First. Swelling and hyperemia of the lining of the middle ear with little or no interference with the hearing.

Second. Pain, fever, diffuse redness of the tympanic membrane, and exudation into the

middle ear, at first sero-mucoid, later mucopurulent.

Third. The hemorrhagic form, the most typical of the four varieties. In which bullae varying from bright red to dull venous color are usually situated on the tympanic membrane, but at times found in the osseous portion of the canal; there are much pain, fever and deafness.

Fourth. The form characterized by violent purulent inflammation of all parts of the middle ear, generally involving the mastoid, with fever, pain and great prostration. Inflammation of the auditory nerve has also been reported as a result of influenza.

The peculiar features of otitis media from influenza are, sudden onset, with excessively severe pain radiating from the ear, marked hyperaemia of all structures with extravasation of serum and blood into the tympanum. These are sometimes ring shaped. Severe hemorrhage from the ear as a result of the marked hyperaemia following rupture or incision is considered by some a special feature of influenza otitis.

There is also a marked elevation of temperature— 101° – 103° —severe headache and depression. Hearing becomes dull, tinnitus is present and may be distressing, vertigo is often present.

In children there may be convulsions as an early symptom and meningitis may be suspected. The pain at first is localized within the ear but later is diffused over side of head, the pain continues until relieved artificially or until the products of inflammation are evacuated by rupture of the drum membrane. In the very early stages the congestion may be confined wholly to the upper part of the drum. It will appear a deep dull red color indicating venous engorgement of the under lying tissues.

At this time measures to abate the disease will prove most efficacious. Later the whole drum becomes of a uniform dull red color, the normal luster is lacking, its surface may be moist. The upper part of the drum may seem oedematous.

Following scarlatina, or any disease with a violent and sudden infection, the surface of the drum may appear a dead white color, due to a necrosis of the superficial epithelium covering it. This dead epithelium is easily removed and below is seen the characteristic red color of the inflamed membrane. Especially during the early stages the tympanic membrane should be carefully inspected sufficiently often to know its condition and thus be a guide to further treatment.

Pain may continue after incision or rupture, for a day or two, which in an ordinary case of otitis, would make us suspect insufficient drainage. After free drainage of the middle ear, the symptoms may all abate, but occasionally there is an invasion of the mastoid cells, with marked pain and tenderness behind the ear which will become a serious complication unless active measures are taken to combat the condition.

The mastoid may become involved before the appearance of discharge or afterward, in either

case an increase of pain and greater severity of the general symptoms, is, as a rule, noticed. Sometimes, however, pus forms in the mastoid with very little spontaneous pain, but it is always elicited by pressure over the antrum or tip of the mastoid.

A pathognomonic sign of necrosis of the mastoid cells is the drooping or dropping down of the membranous auditory canal at its supero-posterior portion. Because of this it is sometimes impossible to see the tympanic membrane. Involvement of intra cranial structures is usually indicated by increase in temperature, delirium, and convulsive movements followed by paralysis or paresis either on the same or opposite side, according to the special side involved.

When there is invasion of the large sinuses of the dura mater, either directly from the middle ear or after mastoid involvement symptoms of pyaemic infection appear. These are rigors, profuse sweating and sudden rise of temperature to 105° or 106° with almost immediate fall to a normal or subnormal temperature. These changes in temperature may occur every few hours or every day or two.

Before speaking of the treatment of this complication of influenza, I wish to say that few appliances are necessary in its treatment and all practitioners should be equipped and willing to give the necessary local treatment, for often times a few hours delay may mean a great deal to the patient.

Treatment: If the patient is seen early active antiphlogistic measures may avert the disease. The nose should be cleansed with an alkaline antiseptic solution. If there is much congestion and stopping up of the nose this should be relieved, by first using a small amount of 2 per cent cocaine, or 1-5000 adrenaline solution, then the post-nasal space should be cleansed by the alkaline antiseptic used in an atomizer with a long tube and up turned tip.

Now by the use of Argyrol 25 per cent, or silver nitrate 5-10 grains to the ounce, by means of a post-nasal applicator, we can reach the tissues from which the infection comes. After this the use in the nose of an oily solution containing Menthol 3-5 gr. to the ounce, or Benzoin, will prolong the contractile effect of the cocaine, and secure more efficient drainage from the nose.

For the relief of pain in the early stages, the use of the artificial leech either just in front of the tragus, or if the mastoid be tender, just over the antrum or the mastoid tip, will be effective. If the pain be severe, hot 1-5000 bichloride of mercury solutions injected into the ear with a fountain syringe, using from a pint to a quart each hour, followed by external hot applications will give decided relief.

Calomel in divided doses followed by a saline is usually indicated. An opiate or one of the coal tar products may now be given to secure rest, but should not be repeated to re-

lieve pain for fear of masking the real condition. Ear drops containing

R Atropia 1 grain
Cocaine 2 grains
Dist. Water 2 3.

are often used, putting eight drops warmed into the ear three or four times a day.

If after the foregoing treatment, the pain continues, and the ear drum becomes bulged, an early and free vertical incision should be made through its posterior portion and carried through the periosteum of the promontory. In this way not only is the confined mucus or pus evacuated but the engorged tissues are depleted. After the incision the ear should be douched to promote the discharge and to destroy the micro-organisms.

Should the mastoid become involved, either continuous cold or frequent hot applications should be applied to relieve the congestion, but not for longer than forty-eight hours unless there be marked improvement in the symptoms.

In otitis of influenza if the bone is involved its destruction is rapid, and an early operation is often imperative to avoid meningitis, brain abscess, facial paralysis or sinus thrombosis.

In a case recently observed, a child three years of age had an acute suppurative inflammation of the middle ear following scarlet fever. Three weeks later was taken with the Grippe. One day after the discharge from the ear ceased, tenderness on pressure over mastoid was noticed, but he complained of no pain except when pressure was made. On the morning of the third day after the mastoid was first found to be swollen and painful on pressure, I opened it, finding it filled with offensive pus with considerable destruction of bone. The antrum was entered and found to contain pus and granulation tissue which was scraped out. By the removal of necrosed bone the membranus sinus was necessarily exposed at the bend of the sigmoid. The sinus being apparently healthy was not opened. The discharge from the ear stopped at once and he made a prompt and uneventful recovery.

In this case there was no pain in or about the ear except upon pressure, since the original acute inflammation of the middle ear six weeks before.

WILL COUNTY MEDICAL SOCIETY.

Regular meetings are held at Joliet the second Tuesday of each month. Membership 46.

Officers.

President H. A. Patterson, Joliet
Vice President H. W. Woodruff, Joliet
Secretary-Treasurer J. P. Benson, Joliet
Censors: H. W. Curtis, Wilmington; Marion K. Bowles, Joliet; V. J. Cohenour, Joliet.

The regular monthly meeting of the Will County Medical Society was held last evening, April 5th, at St. Joseph's Hospital and was well attended. In the absence of Dr. Patterson, Vice-President Woodruff called the meeting to order and Dr. Leach was appointed temporary secretary. Two new members were admitted to the Society. Delegates to the State Medical Society meeting were appointed as

follows: Dr. W. M. Dougall, Joliet, and Dr. Curtiss of Wilmington. The proposed bill for Preventing the Adulteration or Mis-Branding of Foods and Drugs was endorsed by the Society. A banquet will be given next month to the elder members of the Will County Medical Society and a committee consisting of Dr. Patterson, Dr. Woodruff, Dr. Benson, Dr. Nash and Dr. Dougall was appointed to arrange for same. The following paper was read by Dr. V. J. Cohenour and was ably discussed by Dr. Woodruff, Dr. Dougall, Dr. Nash and Dr. McGann.

Some Points in Regard to Post-Diphtheritic Paralysis with Report of a Case.

By V. J. Cohenour, M. D., Joliet.

The frequency of post-diphtheritic paralysis is in direct proportion to the severity of the general infection, yet a severe paralysis may follow a mild type of diphtheria. The location of the membrane has little to do with determining muscle or nerve degeneration which follows. However, a paralysis is more likely to follow a nasal or laryngeal form. Local or general paralysis is the rule after severe toxemia of diphtheria. Paralysis is more likely to occur if from four to seven days have elapsed before the patient is seen by the physician.

Dr. Woodhead in the study of 7,832 cases of diphtheria found 1,362 cases of subsequent paralysis. The time of onset of the paralyzes being as follows:

A—For the palate—5th to the 55th day of disease.

B—For the oculo-motor muscles 4th to the 70th day of disease.

C—For the heart—5th to 10th day of the disease.

D—For other muscles 10th to the 15th day of the disease.

In Myers report, 1,316 cases of diphtheria were followed by 275 or 21 per cent of some form of paralysis. The duration of the paralysis varied from two days to weeks and months, depending on the part paralyzed and the extent and nature of damage as well as treatment when damage was repairable. Dr. Felt of Philadelphia reported a case of paralysis of larynx in a child of 12 years which was of a year's standing there being no improvement. Dr. Wilson, a case of bilateral deafness in a woman 33 years of age which persisted seven months, while Dr. Tooth's case of bilateral deafness gained perfect hearing in eight weeks. Dr. Chas. Kerley reported a case of paralysis of left leg occurring eight days after attack of diphtheria. This lasted three weeks. Dr. Aubertin of Paris reported a case of neglected diphtheria in which occurred malaise, severe toxemia and nephritic involvement followed by motor and sensory paralyzes of general nature with ataxia and later, atrophy. After six months the recovery was only partial.

Pathological changes occur in peripheral nerves, nerve trunks and roots, in the ganglia, in the spinal cord and brain, and their coverings. The muscles show degenerative changes secondary to and independent of nerve lesions;

this is especially true in the heart muscle. The direct cause of paralysis is a toxine eliminated within the body by the Klebs-Loeffler bacillus. This toxine is carried in the blood stream as has been demonstrated by Drs. Roux and Yersin, two noted French pathologists. Drs. Aubertin and M. de Rogers of Paris conclude that the paralysis is due to toxins in the circulation and their action upon the nerve cells.

Symptoms—General:

Single nerves may be involved affecting the muscles they supply; or when convalescence is established in the second or third week, there may be a progressive loss of strength and wasting of muscle, with regurgitation of liquids through the nose and a nasal tone of voice. Sometimes the gait is weak and ataxic so that the child staggers when attempting to walk. Emaciation is general in well advanced cases. Only in extreme cases are the sphincters paralyzed. Palsy of the extremities may be combined with that of the respiratory or heart muscles.

The important types of paralysis which are of interest are as follows: palatal, ocular, cardiac, diaphragmatic and cerebral.

1. Palatal type—The palate is the most frequent site of post-diphtheritic paralysis, over 40 per cent of the 275 cases reported by Myers were of this form. The palate may be the only part involved in paralysis, or may be involved with other muscles. Approximately one-half the cases of paralysis of the palate are in connection with other muscles. The sense of taste and smell are rarely affected; occasionally the hearing is affected. The symptoms are, difficulty in swallowing, regurgitation of liquids through the nose; swallowing causes short laryngeal cough; the voice is nasal and articulation difficult. There is snoring respiration during sleep. The velum is immovable with anaesthesia and abolished reflexes.

2. Ocular type—Diphtheria is the most common cause of paralysis of the ocular muscles. These are not an essential part of the diphtheria but due to the presence in the system of certain resulting toxins. When the ocular muscles are affected with paralysis the order is, muscles of the fauces affecting deglutation then successively involving the muscles of accommodation and those of the extremities. Excepting the muscles of the palate, the ciliary muscles are more frequently involved as a sequence of diphtheria. These cases are generally bilateral, although Dr. Jefferson reported one case of unilateral paralysis of accommodation with midriasis. Paralysis of the eye muscles occurs two to six weeks after the attack of diphtheria and usually disappears in the same period of time. This is first noticed by the fact that the patient is unable to see near objects distinctly, for example, reading. The external recti may be paralyzed, in which case the paralysis is of short duration. While recovery is slow when the internal recti are affected. Ptosis occurs rarely.

3. Cardiac type—The frequency is 9.7 per cent or 32 in 328 cases according to the latest report of the American Pediatric Society. In

275 cases collected by Myers, 64 were of this variety—all were fatal. The direct cause of heart failure in diphtheria has been variously discussed. It is difficult to distinguish changes due to paralysis of vagus and myocardial degeneration. In fact, the distinction can scarcely be made except at autopsy. Some authors think the degeneration of the heart muscle is due to the effect of the toxins; by others these changes in the heart muscle are said to be secondary to functional disturbances of the vagi and organic changes in the nerve structure. The onset varies from the second to the 36th day of the disease. The average time of onset is early, being the 8th day in this list of statistics. The most frequent sufferers are children from two to nine years old. It is impossible to diagnose a myocarditis from a neuritis of the pneumogastric nerves during life.

The symptoms are a weak, irregular heart action, which may be combined with an intermittent or rapid pulse. Bradycardia is frequent. Generally there is a lowering of temperature; abdominal pains may be combined with nausea or vomiting. A galloping rhythm with dilatation of the heart may occur. A short first sound with a systolic murmur at the apex of the heart, and blueness of the extremities are observed in severe cases. There may be extreme restlessness in some cases while in others there is drowsiness and apathy. In other cases we notice sense of weight or distress over the region of the heart; also labored or embarrassed respiration. The duration of fatal cases is from one to fourteen days. The cardinal symptoms are, bradycardia, vomiting and lowering of temperature. The prognosis is always bad in this variety.

4. Diaphragmatic type—Of the 275 cases reported by Myers, 21 were of this variety—10 of the number recovered and 11 died, making 13.7 per cent of total deaths due to paralysis. This type occurs from the 11th to 50th day of the disease, the average being the 37th day. Children from two to eight years old are most frequently attacked. The symptoms are dyspnoea, depression of the abdomen during inspiration, bulging during expiration, and respiration rapid or panting, weakness of the voice, and a tendency to accumulation of mucus in the trachea or bronchi.

This form of paralysis occurs alone as well as with a general paralysis. Asphyxia may occur at any time. When the external respiratory muscles are affected, breathing is almost impossible without assistance. The duration of fatal cases is from 5 to 6 days. When the phrenic nerves alone are affected the prognosis is more hopeful since external respiratory muscles may keep up the breathing until the phrenic nerve injury recovers.

As an instance of this form of paralysis combined with more or less general palsy, is the case of Thadeus S. age 12 years, who had severe local symptoms of diphtheria and profound constitutional disturbances. His attack began five days before I was called. At the first visit he had the following symptoms: high temperature (103) pulse rate 120, bound-

ing and irregular, severe headaches, hoarseness, extremely fetid breath, swollen and enlarged glands, (cervical), and the gray membrane covering palate, tonsils, pharynx, and a small pea-size patch on the tip of the tongue and lower lip. This membrane also extended into the post nasal area. I administered 2,000 units of concentrated antitoxine and repeated the same dose in about 12 hours. In 10 days he had apparently recovered although weak, drowsy, and apathetic.

About two weeks afterwards I noticed a peculiar nasal tone of voice anaesthesia and immovability of palate which indicated a paralysis of palate. He also complained of dizziness and a loss of appetite. About three days later he could not see to read or perceive near objects. His pupils were dilated and failed to react to light showing paralysis of the muscles of accommodation. Just 32 days after my first visit I was hurriedly summoned and found the boy lying on the bed with both lower limbs and right side of the body paralyzed. His breathing was shallow and noisy, and dyspnoea was marked. With each inspiration the upper abdominal wall retracted. Moist rales were heard in the lungs mucous collecting in the trachea and bronchii. He was semi-conscious—the only sign of intelligence was a motioning of the left arm and hands. Aphonia was complete. He could swallow small amounts of liquids which caused more or less coughing. His pulse rate was slow, being only 40 to 50, weak and irregular. Albumen persisted. He gradually became weaker—his heart action becoming slower and slower and breathing more labored. A few hours later the sphincters were paralyzed. About 38 hours afterwards he became weaker and his breathing stopped.

5. Cerebral type—This is purely an accidental form of paralysis and occurs frequently after attacks of diphtheria. The pathological lesion is thrombus, embolism or ruptured blood vessels in the internal capsule of the brain giving rise to hemiplegia ataxia and all other symptoms displayed in adult case of hemiplegia. This paralysis follows not only diphtheria, but also influenza, typhoid fever, scarlet fever, measles, and other infectious diseases, really it should not be classed as a post-diphtheritic palsy.

Prognosis—In general the prognosis for recovery is good in all forms excepting general cerebral, diaphragmatic, and cardiac paralyses. In the statistics of Myers 29 per cent of 275 cases were fatal. When cardiac paralysis develops either alone or combined with other types, death is the rule. The prognosis is extremely bad when both the diaphragm and external respiratory muscles are involved. Dr. F. Burrows reports 2093 cases of diphtheria treated by him in the Boston City Hospital were followed by 106 cases of paralysis. Post diphtheritic paralysis in hospital and private practice is much less common than before antitoxine was used.

The prognosis for subsequent cases of paralysis in diphtheria depends upon the early

administration of sufficient antitoxine as is shown by Brays and Guerards' table:

Time of Administration of Antitoxine—

	Cases	Death	Mortality
1st day of disease.....	1415	5	3.5
2 " " "	2640	213	8.0
3 " " "	2340	300	12.8
4 " " "	1458	346	23.6
5 " and after	1912	671	35.0

By compiling all available statistics, paralysis follows diphtheria in 15.5 per cent of all cases.

First in order to prevent the paralysis, we must prevent diphtheria. This may be done by the administering of immunizing doses of antitoxine to all children in the family where diphtheria exists, also to all children exposed. 500 units usually renders immunity for three weeks. Every suspected case or every known case of diphtheria should receive as early as possible a large dose, (2000 to 3000 units) of antitoxine, regardless of the age. This may be repeated in a period of 12 hours or more. Absolute rest in bed during the toxic symptoms should be enjoined. The treatment of the paralysis is similar to that of any other paralysis and is not within the scope of my paper.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President.....F. C. Vandervort, Bloomington
 Secretary A. F. Kaeser, Bloomington
 Treasurer A. F. Kaeser, Bloomington
 Censors..C. M. Noble, J. H. Fenelon, C. E. Chapin
 Delegate to the State Convention..F J Parkhurst

The McLean County Medical Society met at the Assembly Hall, Illinois Hotel, Bloomington, April 7, at 7:30 p. m., Dr. F. C. Vandervort, presiding.

The minutes of the last meeting were read and approved.

Dr. R. A. Noble reported for the banquet committee that 80 plates were prepared and that the Society was to adjourn to the banquet hall as soon as the business could be transacted.

The treasurer's annual report showed that there was cash on hand April 5, 1904, \$51.65. Dr. C. M. Noble reported for the board of censors that they had examined the treasurer's books and found the same correct.

A communication was read from Dr. J. Whitney Hall asking to be reinstated as a member of our Society.

It was moved and seconded that this be referred to the board of censors and ask them to report at once. Carried.

The board returned a favorable report upon which the secretary was instructed to cast the vote of the Society for reinstating Dr. Hall.

The Society voted to ask Dr. C. R. Parke to prepare a history of the McLean County Medical Society which is to be included in the volume

of history now being prepared by the McLean County Historical Society.

It was voted to fix the dues for the coming year at \$2.50.

The officers elected for the coming year are: (See heading of society.)

It was voted that the president with two other members act as a committee to make recommendations as to what action should be taken in regard to members in arrears for dues of past year, and also to recommend if necessary any changes in our constitution to cover this point. This motion to serve as first notice of any such contemplated change.

The president announced that Dr. O. A. Kell, of Kankakee would next month read a paper before the Society on "Classifications of Insanity with Cases."

After adjournment the members proceeded to the banquet hall where they were joined by the ladies in honor of the "Fiftieth Anniversary of Our Society."

After an elaborate menu the following toasts were responded to: F. C. Vandervort, Toastmaster; Medical Organization, O. B. Will, of Peoria; History of the Society 1854-1879, C. R. Parke; History of the Society 1880-1904, W. E. Guthrie; The Society's Future, J. B. Taylor; The Return of the Prodigal, J. W. Hall.

Medical Organization.

Dr. O. B. Will, of Peoria, responded to the first toast "Medical Organization." He talked of the origin of the medical society and of the great benefit it had been to the medical profession. He said that in the olden days not much interest was taken in medical societies until it was seen of how great benefit they were to the members and after that medical societies have been growing rapidly and there is now scarcely a county in the United States where medical societies are not located. He said the present generation should feel greatly indebted to the old-time doctors who formed the first organization as now it can plainly be seen what a great benefit they have been. The most cherished dreams of the founders of the institutions are rapidly being carried out to a successful termination and if the work continues to progress there will be but few places in the United States at least where monthly meetings of members of the medical profession are not held for the purpose of talking over the vital things pertaining to medicine and in this manner intelligence will be spread through the length and breadth of the land. In this day and hour of trusts said he, the medical profession has kept free from entering into anything that would be a detriment to the profession as a whole but the change in the socialistic conditions almost makes it imperative that the medical men have their associations. From the beginning the medical men recognized that the associations were bound to become of great benefit and they worked hard to see them become regular institutions. As other professions advanced so did the medical profession advance and they have placed their stamp

of approval on medical societies. We hesitate not to point out the noble trace of ancestry of the organization of the medical profession. The time is coming when we must rouse ourselves and do much more in the future than we have done in the past in order that we may keep up the plans originally mapped out for us by the founders of the medical society.

Dr. Parke's Address.

Dr. Charles R. Parke, now of Louisville, Ky., spoke of the history of the society from its foundation to 1879. He said:

Mr. President and Members of the McLean County Medical Society. Ladies and Gentlemen: I am truly delighted to meet once more the members of the McLean County Medical Society, and especially on an occasion of this kind—medical society "golden jubilees" are a little out of the ordinary.

In looking over this audience I am sorry to say there is one familiar face missing—Dr. Jordan. And so we go, one by one, as did the charter members of this society, until only one is left.

I located in Bloomington, August, 1852, and opened an office on the west side of the court house square, where the Headquarters clothing store now stands. Bloomington at that time was a small village, but known as the "city of Bloomington." Many of her old citizens, although not blessed with an abundance of this world's goods, were nevertheless aristocratic and quite ambitious. At that time the Central and Chicago & Alton railroads were being surveyed, and to hear many of the citizens talk of the future of Bloomington, one would suppose the national capitol at Washington might some day be located here.

Many a dry goods box in front of the stores was badly demolished by the loafers' knives while they discussed the glorious future of this city. All of which has not yet been fully realized, although wonderful strides have been made in the direction indicated.

In 1852 there were few buildings of any account around the court house square, and they mostly one-story frames. My brothers erected the first brick building west of the court house square. We had sidewalks around the square and on Front street constructed of plank and answered two purposes—they kept the pedestrians out of the mud and afforded an admirable home for rats.

The resident physicians were Dr. A. H. Luce, G. W. Stipp, T. F. Worrell, T. P. Rogers, Z. L. Hoover, William A. Elder, E. K. Crothers, Espey and Elkins.

McLean county at that time was sparsely settled and the roads in their normal state. The sloughs at certain seasons of the year were almost impassable for wagons, the travelers frequently being compelled to drive half a mile, more or less, up the slough in order to find a suitable place for crossing. Frequently the doctors were compelled to travel on horseback—saddle-bag doctors.

The native "sucker" of that day was constitutionally averse to disturbing the virgin soil, consequently we had miserable roads during the spring. They ("the natives") even assured the new comers clover and timothy would not grow on the prairies.

The practice of medicine in the fifties, I can assure you was no easy task. Several times while making my night visits over the prairies between Bloomington and White Oak and "Stringtown" I lost my way and wandered around for hours before finding my bearings—strictly sober at the time.

I once put in a whole day visiting an old lady who lived north of Saybrook. She was suffering from varicose ulcers. While the husband sat in front of the old log fire looking wise, the madame poured into my ears, for a long hour, her tale of woe (you know a woman can say considerable in an hour). As soon as she let up a little to catch her breath, I ordered my team. While listening to the sad history of that unfortunate limb, I heard a great racket in the poultry yard, and supposed they were preparing to treat me to a preachers' dinner. The dinner did not materialize, but when I entered my buggy for home the old gentleman informed me his wife had made me a present of six chickens and two dozen eggs until I was better paid. I thanked him and drove off. Six old hens and two dozen eggs for a double team twelve hours, and medical services thrown in—he still owes me the bill. Just think of it. Fortunately there were not many such cases in the fifties, but enough. There may be some now.

Some families take to the profession kindly with all its ups and downs. My friend, Dr. J. B. Taylor, inherits his medical turn of mind; his father and grandfather both were physicians. Then again on our roll call of membership we have Dr. Harrison Noble, our first vice president. Stephen W. Noble, Charles Noble, R. A. Noble and Noble of McLean—truly a Noble family of physicians.

On the 20th of March, 1854, the following physicians met in the court house for the purpose of organizing a medical society: Drs. A. H. Luce, H. and S. Noble, Worrell, Crothers, Rodgers, Roe, Hoover, Finch, Parke, Elder, Espey, Ettipp, Crist, Cromwell and Freese. Dr. Luce was called to the chair and Dr. Freese was appointed secretary. The following resolutions were adopted:

"Resolved, That we now proceed to organize a medical society of the county of McLean. Second—That a committee of five be appointed to draw up a constitution and by-laws for this society. The chair appointed Drs. Stipp, Hoover and Roe and the meeting added Drs. Luce and Finch, which completed the committee. Third—That this society shall be auxiliary to the state and national societies. Fourth—That we adjourn to meet two weeks from tonight to receive the report of committee. That all physicians of this and adjoining counties be invited to meet and participate with us.

The second meeting of the society was held pursuant to adjournment at the court house,

April 3, 1854. The committee appointed to draft constitution and by-laws reported and report accepted, when the following officers were elected: President, Dr. A. H. Luce; vice president, Dr. H. Noble; corresponding secretary, Dr. E. R. Roe; recording secretary, Dr. William Cromwell; treasurer, Dr. T. P. Rodgers; censors, Drs. S. W. Noble, Z. L. Hoover and William A. Elder. The following are the original signers of the constitution: Drs. A. H. Luce, G. W. Stipp, E. R. Roe, William Cromwell, S. W. Noble, John Finch, D. L. Crist, C. R. Parke, H. Noble, J. R. Freese, T. F. Worrell, E. K. Crothers, Espey and Conkling.

While 'tis pleasant to be here this evening mingling with this happy assemblage, to me there is sadness in the retrospect. When I pause to reflect on the fact that fifty years ago I assisted in organizing the McLean County Medical Society, and that all my associates at that time have gone to their eternal reward, it naturally clouds somewhat the pleasure of the "golden jubilee," but we must submit to the inevitable. The familiar countenances of those present on that memorable occasion still lingers in my memory, as well as many of their jolly remarks, especially those of Dr. T. F. Worrell, whom you all well remember.

As stated, Dr. A. H. Luce was our first president. He was the leading surgeon of McLean County at that time and "one of nature's noblemen."

The McLean County Medical Society has been a source of much benefit to its members, giving an opportunity to meet, consult and exchange views on difficult, complicated cases, thereby preparing each member to recognize similar cases in the future, and be able to treat them promptly and successfully. This frequent intercourse also enabled us to become better acquainted with each other, strengthening brotherly attachments, binding the members in one harmonious whole.

Metaphorically speaking, medical societies may be likened to so many wells, sunken deep down through earth and rock in search of gravel beds, where nature has stored an abundance of man's most precious beverage—pure water—while members of the society may be looked upon as numerous buckets, descending hour after hour, day and night, returning laden with correct knowledge of the cause of disease and its scientific treatment, dispensing the same to suffering humanity.

I beseech my medical brethren here present to keep this precious well properly protected, so no infectious surface microbes be allowed to enter and lessen its power for good.

The old, original buckets of the McLean County Medical Society have long since ceased to labor at the well, and also many of a later date, but left it in fine condition for the use of their successors.

The doctor's life, like the bucket in the well, is an up and down life, in bed and out at all hours.

And now what can I say for the last old charter bucket that has been descending and

ascending the McLean County Medical well for the last fifty years:

"This old oaken bucket,
This iron bound bucket,
This moss covered bucket
That hung in the well."
Good-by.

Dr. W. E. Guthrie's Talk.

Dr. W. E. Guthrie in reviewing the history of the society from 1880 to 1904, said that his work for this society was carrying extra chairs for its meetings into the office of Drs. White & Worrell, where he was then studying medicine. Of the active participants in those meetings who lived in Bloomington in 1881 only four are alive and three in active practice; from the country towns only Orner and Winter of Saybrook; McFarland, of Heyworth; Holderness, of Chenoa; Noble, of McLean; Chapman, of White Oak, and Hull, of Arrowsmith.

Dr. Guthrie then devoted considerable of the time of his address to a very entertaining description of an imaginary meeting of the McLean County Medical Society in the old days. He described the office of Drs. White and Worrell, where the meeting was held, in the old Royce block, and as each member of the society, in imagination, entered the room, Dr. Guthrie, in a sentence or two, took off the salient points of his personal appearance, or referred to some striking incident of his personal or professional career, some of which were not altogether complimentary, but which provoked the risibilities of his hearers.

"Dr. White sits by the fire smoking and musing; Dr. Worrell, pompous of manner and plethoric of speech, is talking sometimes to Dr. White, sometimes to me, but as often to himself. The dignified form and towering head of Dr. A. Luce are framed by the door; with great gravity and dignity he shakes hands with the other doctors and does not notice the insect sitting in the corner. Dr. Howard Crist next enters, shakes hands around and takes a seat, still smoking his cigar. Dr. Kirk, of Atlanta, of whom our own Dr. Vandervort is a very good copy, arrives next and asks Dr. White into an adjoining room for a private talk before the meeting begins. Dr. William A. Elder and Dr. R. G. Laughlin come in, engaged in earnest conversation—Dr. Elder quiet and unassuming. Dr. Laughlin a pink of propriety in dress and demeanor, every inch a military man. Dr. Gray, a tall, portly, fine looking gentleman, is the next to arrive. He had retired from practice, but rarely missed a meeting. Dr. Hiram Luce, slender, straight and stern, enters and takes a seat, picking up a book to read. Dr. Luce was a very talented man, but his practice was never so large as his talents deserved. Dr. Winter of Saybrook, comes in and monopolizes the talk.

The door opens and the secretary enters—Dr. Little, walking the steady, even motion of a ship entering port, with a book of minutes under his left arm, an umbrella in his right hand pointing to a spot exactly three paces to the front. After Dr. Lehman there enters a new doctor who speaks in broken English and manifests other noticeable characteristics—he has married a

Bloomington girl and already has a large practice—it is Dr. Wunderlich. Now there is a great racket—a general and his staff are arriving. It is the president of Dr. Hill's dissecting academy, and his students and admirers from near and far. A quick step is heard and Dr. Lee Smith arrives in mudbespattered coat, and condones with Dr. Worrell on the recent "8 to 7 crime" which kept his beloved Tilden from the presidency. It was at that time that Dr. Smith's hair began to turn gray. As the society is about to open two female forms appear, Drs. E. A. Shaw and Eliza Dawson.

Among those who did not attend the meeting Dr. Guthrie mentions Dr. Parke, who, he said, stayed away from the meeting because he was the holder of a patent on a splint which he had invented for treatment of fractures of the femur. On account of holding this patent he withdrew from the membership of the society. It was told as a joke on Dr. Parke that after inventing his splint, securing his patent and withdrawing from the society, he was confronted by what he most desired, a fracture of the femur; it was treated in the most approved manner and resulted in an embarrassing un-united fracture, doubtless, through no fault of the splint.

Dr. Guthrie mentioned as other members of the society at that time Drs. Asire, Bickmore, Ballard, D. L. Crist, Carr, Crothers, Cole, Hoover, T. Haering, Kopp, D. O. Moore, Miller, Rogers, W. T. F. Smith, Tenney. In the adjoining towns were McFarland and Pollock at Heyworth; Spear at Shirley; Johnson and Noble at McLean; Harvey Parkhurst and G. D. Elder at Danvers; Chapman at White Oak; Hubbard and Johnston at Hudson; Kerr of El Paso; Graham, Jones and Waters of Lexington; C. S. Elder and Holderness at Chenoa; Shinn and Sweeney at Normal; Douglas at Colfax; Skaggs at Ellsworth; Hall at Arrowsmith; Orner and Winter at Saybrook; Godfrey at Bellflower; McKenzie, Fisher and Espey at Leroy; Montgomery at Downs.

Dr. Guthrie then mentioned a long list of names of practitioners outside of the medical society, including Drs. McCann Dunn, Jeff Dunn, B. P. Marsh, J. Loar, N. Loar, Zera Waters, M. Faloon, Wright, Amos S. Burrows, J. W. Craig, Hubbard, Voak, Weber, Woolsey of Normal.

Those who have been here and either have died or moved away are: S. T. Anderson, Richard Burns, G. W. Mason, A. T. Barnes, Mrs. Crothers, C. J. Corley, J. Montgomery, G. M. Smith, W. L. Hallam, A. T. Darrah, Taylor, N. F. Jordan, C. E. Burke, J. H. Stein.

"Our community is considered a healthy one, but it is either unhealthy for physicians or especially healthy for their wives, for their are now living eighteen widows of doctors who have practiced in Bloomington. This community has been especially blessed with a high class of medical practitioners. There has been less quarreling and backbiting among us than in any town within my knowledge."

In conclusion Dr. Guthrie said: "In this glass of pure water which has been sterilized of every bacillus of professional envy or jealousy, rancor or hatred, I drink to the continual prosperity of

this society and its members. And when, fifty years hence, the society celebrates its centennial anniversary, I will tell those present of this banquet and describe the sterling qualities and humorous characteristics of Drs. Hill, Smith, Parke, Mammen, Chapin, Meyer, McCormick and other old fellows long since passed away."

Dr. J. B. Taylor.

In speaking to the "Future of the McLean County Medical Society" Dr. J. B. Taylor said in part: "I am fated to be the last on every program on which I appear. Fourteenth and last at a banquet of the Business Men's Association a year and a half ago. Fifteenth or sixteenth—and last—at a banquet in February recently. I judged I would be seventeenth and last this evening. I am confused and concerned at the meaning of this. Perhaps they have arranged to put the poorer wine last, when the appetite is somewhat cloyed and dulled by the sweet things which have gone before. Perhaps it is a decreasing series in age. This is relatively comforting. After the revered fathers (Dr. Parke and Dr. Guthrie) have spoken of the days gone by to which their patriarchal memories reach back, it may be quite the correct thing to have the prophecy of what the society is yet to be, lisped by some one of us younger fellows whose face is still in the front."

After two or three clever stories, Dr. Taylor said: "This evening celebrates the continued evolution of the society, and in the spirit of prophecy I am to tell what it will be. First, the medicine of the future will be more strenuous, more vigorous, more tested, more interlocked with the other sciences. We should all be sorry if our profession did not join the profession of advance. Our profession of the future will be a more disciplined profession. It must stand square to the demand and the accuracy of a dozen sciences which interlock with it. It will do away with mysticism, with mistiness, guesswork, groping, the temptation to play upon your own credulity and that of others. It demands that juggling and hocus-pocus disappear from the profession. The profession will more and more wear the badge of thinkers.

"Second. These handmaidens which make us more accurate will lead us to better success. Future members of the society will have arms and powers which we cannot have, and will attain proportionately better results.

"Third. There will be more thorough dignity in the profession in the coming days than now. The scientific spirit will supplant the buncomb spirit. The remnants of spread-eagle, of pretense, of false swagger, which crop up and show themselves in the profession today, will in those good days to come have fallen into disrepute.

"Fourth. Members of the profession in the future will in larger degree be men of affairs. They will intermingle more with the world's great interests which touch men as citizens. Their public offices will be magnified; they will become more and more the adviser of society.

"What of the future of the McLean County Medical Society? The same as the future of medicine. In the enlarged and more cultured and yet more beautiful Bloomington; in the ad-

vanced, wealthier and more exacting McLean county, the society will be the mouthpiece, the organic body, the means of a commensurately advanced medical profession. It will be a more trained and balanced profession; a better armed and more successful profession standing more upon the consciousness of its worth—less P. T. Barnum in it, less pretense in it—a profession which by reason of the sciences which it overlaps will be more efficient, more interlocked, more honored in all public movements—and in this part of the world the McLean County Medical Society will be its prophet.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 72.

Officers.

President	L. A. McFadden
First Vice President	J. C. Roberts
Second Vice President	B. M. Stephenson
Treasurer	Jeanette Wallace
Secretary	S. M. Miller
Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.	

The Peoria City Medical Society met in the Observatory Building March 15, Dr. L. A. McFadden, presiding.

E. A. Garrett and F. K. Sidley were admitted to membership.

The secretary read a communication from C. A. L. Reed, chairman of the Legislative Committee of the American Medical Association, urging the support of the society to the Pure Food Bill pending before Congress. A committee consisting of R. A. Kerr, C. H. Brobst and C. U. Collins was appointed to act in accordance to the request of Dr. Reed.

Dr. Lucas reported a case of **Ectopic Gestation**.

Dr. Lucas: The importance of operation before serious hemorrhage and the difficulties attending a positive diagnosis of the form of rupture present; whether it be into the broad ligament with restriction of hemorrhage, or out of the top of the tube, without such restriction were the points brought by the essayist as was also the importance of the placental site.

The following case was presented:

Mrs. C., aged 29, mother of three children. Family history negative. Has had no serious sickness, no miscarriages. In June of 1903 she failed to menstruate, and felt that she was pregnant. At the usual July period, and at subsequent periods, also at irregular intervals, she noticed slight bloody discharges from the vagina, together with a leucorrheal discharge. At these periods she suffered some pain, and though this was some times severe, and at others moderate in amount, at no time could it be stated that it was agonizing in character. Her husband stated that he had on one or two occasions held her in bed on account of excessive pain. About November 1 she noticed a tumor in the right lower quadrant of the abdomen, and this she observed growing larger as time went on until she finally thought it could not be pregnancy but probably a tumor. She came under my observation about January 20, 1904, and entered

the Cottage Hospital on the 23d of that month, when the following condition was present:

On inspection the abdomen was seen to be generally enlarged, with a distinct rounded swelling in the right lower quadrant. Bi-manual examination revealed this to be apparently a hard immovable mass attached to a larger immovable rounded tumor mass occupying the median portion of the abdomen, with its upper border on a level with the umbilicus, a sulcus occurring between these tumors; also a smaller and softer tumor mass occupying the left lower quadrant low down and encroaching upon Douglas cul-de-sac. Auscultation revealed nothing. The usual signs of pregnancy were present. Under careful aseptic precautions a sound was introduced within the cervix and after passing up about three inches, it met with an obstruction. This examination was discontinued as it was feared that a fetus occupied the uterus, and as blood followed the sound on its withdrawal. The patient was returned to bed and put under close observation for a few days, when the nurse called my attention to something in the napkin, which on examination proved to be decidual membrane. The patient was then carefully prepared, and on the first of February was operated. The usual median incision was made and the following conditions quickly observed: the tumor mass in the right lower quadrant proved to be a very much enlarged uterus, dense globular and about seven inches in diameter, and attached to many strong adhesions posteriorly to the mass occupying the middle zone; the left tube was fully three-fourths of an inch in diameter and its fimbriae fixed in this large smooth-covered mass in its left lateral aspect. A loop of small intestine laid over the large tumor diagonally in its upper portion and was firmly fixed on it, having no apparent point of cleavage. On attempting to free this loop of intestine, the gestation sac (for such it proved to be) ruptured and the hemorrhage from the raw surface was excessive. The sac was then freely incised, after applying clamps to check the bleeding, and the head of a fetus was exposed to view. It was quickly removed, the cord tied and cut and the fetus found to be alive, but much deformed about the head and limbs from pressure. It gasped feebly and expired in about ten minutes. Blood welled up profusely into the mouth of the gestation sac. I put my gloved hand down into the sac, and found the soft mass in the left lower and central region to be the placenta, which was attached to the pelvic floor. The removal of this was not attempted. The sac was packed firmly with gauze and its edges stitched to the peritoneum and fascia in the incision, the general peritoneal cavity being thus closed off. The placenta being left to detach itself piecemeal, and its removal left to a later period.

The patient had, as I failed to state, a temperature of 99 to 100 degrees F previous to the operation and she soon developed sepsis and died on the sixth day after operation.

The operation was done in the strictest aseptic manner, rubber gloves, re-sterilized dressings, etc., and every care exercised in the

handling of the case afterwards, yet with a fatal issue.

Evidently this case was one of rupture into the broad ligament with splitting of its layers, and development of the fetus retro-peritoneally. A post was refused but I believe it would have demonstrated this. The left tube presented no evidence of rupture.

This operation I believe was the only proper one under the conditions here prevailing.

Dr. Sutton: I cannot acquiesce in the surgical treatment instituted in this case. It is possible that text books might be found that would give recognition to it, but I could not lend approval to it by silence.

The placenta should never be left in the abdomen. A placenta left in the uterus is with the greatest ease infected, and leads to sapremia. The possibilities of infection are much greater when the placenta is left in the abdomen, and therefore it should be invariably removed, and there is never justification for leaving it.

In such a case there is but one proper method of procedure, which I follow. First secure both uterine and ovarian arteries. This will prevent the oozing from the adhesions and from the placental site. Had this been done the removal of the placenta might have been then accomplished, without such embarrassing hemorrhage as the operator encountered.

If the adhesions prevent free access to the uterine arteries, it may be advisable first to split the uterus from the fundus, before being able to secure these vessels.

Very probably, and evidently, this was a case of rupture into the free peritoneal cavity, and a new sac was formed by the adhesion of intestines around the fetus, and it was not a case of retro-peritoneal development of the placenta. The adhesions of the coils of intestines prove this.

Dr. Collins: I have been much interested in hearing the report of this case, and especially commend Dr. Lucas for his candor in reporting a case ending fatally, an example some of the rest of us would do well to emulate.

There are two points usually to be noted as characteristic in the history of a case of ectopic gestation, and they are not lacking here. 1st, some irregularities of the menstrual flow; 2d, the pain.

It was my good fortune through the courtesy of Dr. Lucas to be present at this operation, and he has graphically described the situation. The tube had evidently ruptured between the folds of the broad ligament, and the fetus had developed here, dissecting up the peritoneum of the cul-de-sac and posteriorly. The lowest loop of this ilium lay over the gestation sac. The placenta lay deep in the pelvis below the fetus, spread out over the concavity of the pelvis and posteriorly. In ectopic gestation, the placenta is formed from the fetal envelopes and it obtains its nourishment from the tissues with which it comes in contact. Therefore I cannot see how one can say dogmatically that the tying of the uterine and ovarian arteries will control the hemorrhage. This is illustrated in Tuhol-

ski's case, (*American Gyn. and Obst. Journal*, 1901), where the fetus became attached to the under surface of the liver and the diaphragm. Surely ligation of uterine and ovarian arteries would not have availed here.

Dr. Collins quoted various authorities in the recent literature; the writers invariably were unanimous in the view that in the case of a fetus viable, after the sixth month, the operator must frequently be content with stitching the gestation sac to the incision, packing the placenta with gauze, and allowing it to detach itself.

It is a condition, and not a theory, that confronts us in these cases. The conditions found by Dr. Lucas in his case justified him fully in following the course which he did.

Dr. Miller: I cannot see how the ligation of the uterine and ovarian arteries will materially check the hemorrhage from a placental site situated outside of the distribution of these vessels. It occurs to me also, that, in such a case as this one, a bisection of the uterus and the necessary removal of the organ in order to reach the uterine arteries would unjustifiably multiply the dangers of the operation, and jeopardize the life of the patient.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m.
Membership 73.

Officers.

President B. B. Griffith, Springfield
Vice President S. E. Munson, Springfield
Secretary-Treasurer C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

The society held its regular monthly meeting April 11, 1904, in the Supervisor's Room. Meeting called to order at 8:30 by President B. B. Griffith. There were 21 members present, the largest number since the banquet meeting in November.

Minutes of last meeting read and approved. Bills amounting to \$3.25 were read and ordered paid. President Griffith reports poor prospects of obtaining a room in the new library building. The application of Miss Susan Merritt to read a paper on **Medical Gymnastics** at our June meeting was referred to program committee.

Dr. Geo. N. Kreider read a paper on the **Surgery of Tuberculosis of Bones and Joints**. He presented the subject from a practical standpoint, citing over forty cases in his own experience and illustrating the symptoms and treatment from these. He believes there is a tendency to call the majority of bone and joint affections tuberculosis, but the diagnosis should be properly made by exclusion. He advocates the use of the X-Ray and believes it has been extensively and favorably used, and also recommends the sunporch. The treatment he thinks should be conservative to a certain point. In cases of hip disease where operation was necessary he has had better results with amputation than excision. In cases of cavities of the bone after evacuating and curetting use iodoform emulsion, or plug, with amalgam containing iodoform. In spinal, hip and other joint cases

where the pressure can be relieved either by splints or plaster casts with plenty of fresh air and sun light the results are often remarkable. The discussion was opened by Dr. Hopkins and participated in by most of the members present.

Dr. O. F. Maxon read a paper on **Tuberculous Family History in Relation to Life Insurance**. Just as tuberculosis is the scourge of the general population of all civilized countries, so it is the principal cause of mortality in the experience of life insurance companies. The Mutual Life of New York found that consumption caused 17.61 per cent of the total mortality. The Washington Life Insurance Company reported that it caused 17.65 per cent of the total mortality and the Australian Mutual Provident Society stated that the deaths from phthisis were 12.73 per cent of the total mortality.

Craig (*Journal of Am. Med. Association*, 1902) stated that: It has been recently estimated that there are one million cases of active tuberculosis in the United States, and the latest authentic statistics show that 14 per cent of the deaths recorded for ten years are due to some form of tuberculosis. The tabulated results of consecutively made post mortems are still more appalling as revealing its frightful preponderance over all other pathological conditions. In 100 consecutive post mortems 65 per cent showed tuberculosis. However the deaths caused directly or indirectly by tuberculosis, is a very small part of the number actually affected by this disease, it can almost be considered a universal condition.

In view of these facts, life insurance companies have adopted a more liberal policy, and their present rules differ considerably from those which they formerly had. As a general statement, it may be said, that a person who is suffering with an evident tuberculous lesion, is not eligible for the standard plans of ordinary policies. On the other hand, however, persons in whom there has previously existed a tuberculous lesion, but which has after a number of years shown evidence of probable permanent quiescence may be accepted for certain policies upon a premium sufficient to cover the hazard. Those persons of middle age, giving a history of early local tuberculosis involvement of glands or bones which have since given evidence of permanent recovery, either spontaneously or by operation, and who are standard weight and well nourished, should be considered as first-class risks. The greatest questions involved in the consideration of tuberculosis and life insurance have been along the lines of heredity, and contagion from contact. You can understand how impossible it is to ascertain as to whether exposure to the disease has resulted in infection. The action of the companies in treating such cases, in which there is a history of exposure from a resident in the same house, or where the applicant has nursed such a person, varies from rejected to postponement for from one to five years to await development. As to the transmission of tuberculous tendencies of heredity, Dr. E. J. Marsh, of the Mutual Life of New York, made a study of twenty-two

thousand cases, which was the mortality of that company for a period of fifteen years.

As a result of this investigation he came to the following conclusions:

1st. That the history of consumption in any member of the immediate family increases the probability of its appearance in an applicant.

2d. That consumption in a brother or a sister is at least of equal importance as when it has occurred in a parent.

3d. That persons who are under the average weight are much more liable to consumption than those above. That the peculiarity of constitution which is indicated by the inability to take and assimilate a proper amount of nutriment indicates a susceptibility to phthisis, or at least is a reasonable suspicion of such predisposition.

4th. That persons who exhibit a robust and well developed body have little susceptibility to consumption.

5th. That the personal condition or weight and robustness has far more value than family history in diminishing the liability to consumption.

6th. The evidence presented by a well developed body may outweigh the suspicion attached to unfavorable record.

7th. That these influences of family history and personal weight are of the same grade for every age, and their importance is not lessened by the fact that the individual has reached middle life.

The result of this investigation disproves the old idea that persons of tuberculous families can out grow the susceptibility to the disease upon attaining middle age. The fact that the mortality was the same for cases giving histories of tuberculosis in a brother or sister, as when it had occurred in the parents, is still more remarkable. The strongest argument in favor of the belief in the hereditary transmission of the disease, has been the frequency with which tuberculosis is met with in the descendants of those affected. If we are justified in assuming that conclusive proof of the hereditary character of tuberculosis is wanting, the question of the importance of tubercular family history is of value only as a warning to the medical examiner to make a thorough search for hidden foci. It is not too much to expect that the day is not far off, when we can hope to see that great host of individuals who are at present debarred from insurance privileges, through the misfortunes of ancestors, accepted without hesitation as desirable risks, with profit to the insurer and to the insured.

Adjourned.

THIRD COUNCILOR DISTRICT.

A meeting of the secretaries of the county societies in the third councilor district was held in Galesburg, Illinois, March 18th, under the auspices of the Knox County Medical Society. Dr. J. F. Percy, councilor for this district, presided at the morning and afternoon session, while Dr. R. C. Matheny, president

of the Knox County Medical Society, presided at the banquet held in the evening.

Dr. J. N. McCormack of Bowling Green, Ky., General Organizer of the A. M. A., was present, and made an address in the afternoon. There were also present Dr. John A. Koch, Quincy, secretary of the Adams County Medical Society; Dr. M. T. Ward, Toulon, secretary of the Stark County Medical Society; Dr. A. N. Mackey, Aledo, secretary Mercer County Society; Dr. J. B. Holmes, Macomb, secretary McDonough County Society; Dr. G. S. Bower, secretary Knox County Society; Dr. F. E. Wallace, Monmouth, represented the Warren County Society in the absence of Secretary Dr. E. J. Blair; Dr. C. B. Horrell, Galesburg, secretary of the Military Tract Medical Society. Drs. S. M. Miller and C. U. Collins, the former the present and the latter an ex-secretary of the Peoria County Society, were present by invitation.

The meeting was called to order at 10 A. M. by Dr. Percy. After stating the object of the meeting, the chairman read a telegram from President Black of the State Medical Society, expressing his regret at not being able to attend the meeting, owing to personal illness.

The greater part of the morning session, and the early part of the afternoon was taken up with a report from the secretaries of the various county societies present as to their experiences and difficulties in maintaining the life and work of their respective organizations. The reports made an interesting symposium on county medical organization in general. One of the most prominent facts brought out was that of general professional apathy toward medical organizations, on the part of medical men. The explanations dealing with this state of affairs, and the remedies, were numerous and good. A curious phase of the question of medical organization was the one reported by two or three of the secretaries present, viz.: That some of the members of their organization did not care to have membership in the county society entitle them also to membership in the state organization. It was the general consensus of opinion, however, considering matters medical from the standpoint of the present and past, that there had been a distinct and decided improvement.

During the afternoon, Dr. S. M. Miller of Peoria, read a most interesting and instructive paper entitled: **Pathology of Varicose Veins in the Broad Ligaments.** Following Dr. Miller's paper was an address by Dr. J. N. McCormack on **The Difficulties and their Cure in the Organization of County Medical Societies.** Dr. McCormack based his remarks on the reports which he had previously heard from the county secretaries present at the meeting. It is difficult to give an adequate report of Dr. McCormack's address. In the hour and a quarter during which he had the floor, the ills of the medical profession were completely diagnosed, and the treatment thoroughly and clearly laid down. An interesting feature is that, following the Doctor's address, all the comments on it by those present were to the effect that there was nothing impracticable in the suggestions

made for the raising of the professional standard among the physicians themselves. It was a general matter of regret that more physicians could not have heard this "Apostle of Organization" in his presentation of the newer things in medical and professional organization.

In the evening a banquet was served by the Knox County Medical Society to the visiting physicians. Twenty-six medical men were present. In the absence of Dr. McCormack (who was called home by a telegram because of illness in his family) addresses were made by Dr. Louis Becker of Knoxville, ex-president of the Knox County Society; Dr. L. R. Ryan of Galesburg, and Hon. Wesley Holt, city attorney of Galesburg. After these addresses, which dwelt on the relationship of professional men to each other, the meeting was thrown open by President Matheny to everyone present. This resulted in short addresses from every physician, and added greatly to the enjoyment of the evening.

G. S. Bower, Secretary.

DOUGLAS COUNTY MEDICAL SOCIETY.

Regular meetings are held in Tuscola the first Thursday of February, May, August and November. Membership 27.

Officers.

President C. F. Voyles, Murdock
Secretary Walter C. Blaine, Tuscola

The Douglas County Medical Society met in regular session in the K. of P. Hall, Tuscola, on February 4, 1904. The following members were present: Drs. Reat, Rice, Brenton, Voyles and Blaine. The President Dr. Voyles of Murdock called the meeting to order.

The following applications for membership in the Society were read and referred to the Board of Censors who reported favorably on all of them. Drs. Lockwood of Atwood, graduate of the College of Physicians and Surgeons, Chicago, 1902, Harper of Villa Grove, graduate of the Indiana Medical College 1897, and Alexandra of Oakland, graduate of the Kentucky School of Medicine, 1894. The fee bill as corrected by the Committee was then read and adopted by a full vote of those present.

The following resolution was then introduced:

Resolved, That the Secretary of this Society forward to the State Medical Society the money paid him by the individual members of this Society for membership in the State Society and that the aggregate amount thus forwarded shall constitute the sum total of the claim of the State Society on this the Douglas County Medical Society.

This resolution was passed by the unanimous vote of the Society. On motion the President appointed a Committee of five consisting of Drs. Brenton, Rice, Ewing, Allen and McNeil to arrange ways and means of holding a banquet at our next annual meeting held in May. It was then moved and seconded that this Society favor the plan of making a protective feature in the Membership of the Illinois State Medical Society against persecution and prosecution of claims for mal-practice and black-mail against physicians holding membership in

the State Society. The motion carried by full vote.

An excellent paper was then read by Dr. Reat entitled "Should we ask for such a Law?" It was received by the Society and discussed by the members present. Dr. Hall's paper was then read by title and referred back to him to be read at a future meeting. As the hour was late the Society adjourned to meet the first Thursday in May.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President.....L. H. A. Nickerson, Quincy
1st Vice-President.....John A. Koch, Quincy
2d Vice-President.....J. M. Grimes, Camp Point
Secretary.....G. E. Rosenthal, Quincy
Treasurer.....R. J. Christie, Jr., Quincy
Censors.....C. D. Center, Chairman, Quincy
Jos. Robbins, Quincy; L. B. Ashton, Quincy.

The regular monthly and annual meeting of the Adams County Medical Society took place in the Chamber of Commerce Rooms April 11th, W. W. Williams presiding.

The following members were present: Drs. Ashton, Burch, Byers, Center, Christie, Jr., Knopheide, Knox, H. J. Nichols, Nickerson, Pfeiffer, Rosenthal, Sigsbee, Vasen, J. G. Williams, W. W. Williams and John A. Koch.

The secretary reported the proceedings of the meeting of the secretaries of the counties in the 3rd Councilor District of the State Society held in Galesburg, March 18th, which the secretary was instructed to attend. At the morning session reports were given from the secretaries of the various counties. In the afternoon National Organizer Dr. MacCormack of Bowling Green, Ky., gave a very interesting address on the benefits of medical organization. In the evening a banquet was given by the Knox County Medical Society.

The Annual report of the secretary was given:

To the Adams County Medical Society:

I herewith respectfully submit the secretary's annual report:

Balance reported on hand April, 1903,	
in the treasury.....	\$142 66
Money received since the last annual meeting	256 00
Total	\$398 66

Authorized expenditure since last annual meeting.....	\$294 52
---	----------

Balance	\$104 14
---------------	----------

During the past year there were 11 meetings. The average attendance was 11. Three applications were received. One applicant elected. Two applications are in the hands of the censors. Five essays were given and ten clinical reports.

A census of the physicians in the county was taken during the past week and the results are as follows:

In the city there are 77; outside of the city 51; total 128. Members of the society in the

city 47 active, and 3 honorary; members outside of the city 18; total 68.

John A. Koch, Secretary.

The annual report of the Treasurer, L. H. A. Nickerson is as follows:

Balance on hand April 1903.....	\$142 66
Money received from the secretary since last annual meeting.....	256 00
Total	\$398 66
Paid out on vouchers.....	\$294 52

Balance on hand..... \$104 14

The officers were elected for the ensuing year as above.

John A. Koch gave a clinical report and presented a case of **Huntington's Chorea**.

A Case of Huntington's Chorea.

I wish to present to the society a patient from my service at St. Mary's Hospital. This patient as you see, shows very peculiar muscular movements, performing involuntary movements of the head, arms and hands. The moment an attempt is made to arise from his seat, these movements become greatly exaggerated, and most peculiar distortions of the face are made when he protrudes his tongue. His speech is altered in consequence of muscular movements of the buccal cavity, pharynx and respiratory diaphragmatic muscles, and imparts to the speech a nasal, confused, obstructed and sticky articulation. He is unable to point his finger to the nose without making a series of zigzags. The muscles of the lower limbs are at times affected, causing a halting and staggering gait. Patellar reflex is present and not exaggerated. By making a great effort he can control to a great extent these muscular movements, but as a rule they then recur with greater intensity. During sleep he is perfectly quiet. The memory is good if given time to think.

This condition shows plainly a form of chorea first described by an American named Huntington, a physician of Long Island, and the disease is known by his name, also called Chronic Progressive Chorea.

It differs from Sydenham's Chorea in that the muscular movements are of longer range and whole groups of muscles being set into action as in a voluntary movement. In Sydenham's Chorea the muscular movements consist of fibrillary contractions that are jerky, beginning quickly and ending quickly.

It also differs from the regular Chorea by its seldom occurrence before the 30th year, hence often called Latent or Tardy Chorea. This case is of especial interest because there is an entire absence of family history of the disease. He is 46 years of age and was born in Wisconsin. Married, but has no children. His father died of typhoid-pneumonia aged 52. Mother died at about the age of 30, cause unknown, the patient being but two years of age when she died. None of his brothers and sisters now living are afflicted as he is. In 1891 he contracted syphilis. This condition of chorea came on him suddenly in August, 1895, while walking. He suddenly noticed he could not speak and thought it was

the beginning of a paralysis. A feeling of great weakness seized him and became unconscious, remaining so for several hours. Contrary to the usual history of these cases, his condition at present and for some time past is better than it was in the beginning, but it seems now to remain stationary. The patient is able to work, he laying claim to the title of "Wire King of America." Heredity is a very factor in Huntington's Chorea, and in this sporadic case there is probably some choreic family tendency which is not determinable. Syphilis, however, may be no small factor in this case. His general health is little or not affected, he is in a well nourished condition, in good spirits and says he feels well.

A study of this disease will convince one readily that there is a big difference between it and Sydenham's Chorea which is seen so often and easily cured. Huntington's Chorea is a disease of the cerebrum, while regular chorea is a neurosis. There is no united opinion as to the exact pathology, but the consensus is that the cortical and sub-cortical substance of the brain are effected, the locality however, varying.

The prognosis is unfavorable. It is an incurable disease. We know of nothing that will stay its progress. The mental condition becomes gradually impaired.

The treatment consists in the administration of Fowler's Solution, Bromides, Hyoscine and the Galvanic Electricity.

Discussion by Drs. Byers, Rosenthal, J. G. and W. W. Williams.

President named the following committee on Program and Scientific Work: G. E. Rosenthal, Chairman, Sarah Vasen and John A. Koch.

The following members, according to chapter V of the by-laws, stand suspended on account non-payment of dues at the annual meeting: W. H. Baker, H. O. Collins, Grant Irwin, W. E. Miller, E. H. Toole, A. D. Bates, L. L. Gill, S. B. Jarrett, J. H. Pitman, S. J. Wilson, H. P. Beirne, H. M. Harrison, D. M. Landon, W. G. Schmidt, R. Woods.

Adjournment.

John A. Koch, Retiring Secretary.

EAST ST. LOUIS MEDICAL SOCIETY.

Regular meetings are held every two weeks. Membership 30.

Officers.

President.....	C. F. Whitmer
Secretary.....	C. W. Lillie
Treasurer	W. H. McLean

The East St. Louis Medical Society met in regular session on April 18, 1904, with President Hanson in the chair, and C. W. Lillie, secretary, and the following members present: Rendleman, Campbell, Nifong, Hertel, Thompson, Wiggins, Voris, Wiatt, and Adams.

Minutes read and approved.

The committee appointed at a former meeting to draft resolutions regarding the financial interests of the profession reported with a recommendation that all physicians of the city organize a Physician's Protective Association on a purely business basis, and that each member of the society be made a committee to solicit other physicians to join such an organization. The report of the committee was accepted, and in accordance with the suggestions in the re-

port a special committee to draft suitable by-laws for the new organization was appointed, the committee being constituted as follows: Lillie, Adams and Wiggins.

Edward Lewis, the man with the so-called "musical heart," was present and was examined by all the members present.

The committee appointed to devise some means to prevent druggists from prescribing made a report recommending that a list of all those who are violating the law be sent to the secretary of the State Board of Health, and those present handed in the names of such as had been known to be habitual violators of the medical practice act.

Campbell read a paper on **Peritonitis** which proved to be a very interesting feature of the meeting, and which was discussed by several members.

Society adjourned.

FAYETTE COUNTY MEDICAL SOCIETY.

Regular meetings are held quarterly at Vandalia. Membership 14.

Officers.

President.....E. W. Brooks, St. Elmo
Vice-President.....M. Haynes, Bingham
Secretary.....A. L. T. Williams, Vandalia
Treasurer.....H. D. Smith, Vandalia

The Fayette County Medical Society met in Vandalia April 13th. Baxter Haynes of the Montgomery County Medical Society, one of the oldest and most successful physicians of southern Illinois was present and made an address on **medical ethics** and the benefits to be derived from the county organizations. The doctor's talk was full of good things and was enjoyed by all those present.

Dr. F. Buckmaster of Altamont read a paper on **a brief consideration of the sexual instinct and how influenced directly and indirectly by dancing.**

F. G. Rewann, L. L. B. read an instructive paper on **the expert witness.**

Dr. J. H. Wallace was elected to membership and Dr. M. E. Keppner was granted permission to join the Effingham County Society.

The annual election of officers resulted as above:

There being no further business the Society adjourned.

DEWITT COUNTY MEDICAL SOCIETY.

Regular meetings are held in Clinton on the second Tuesday of January, April, July and October. Membership 25.

Officers.

President.....John H. Tyler, Clinton
Vice-President.....G. M. Robertson, Wapella
Secretary and Treasurer.....A. E. Campbell, Clinton
Delegate to the National Association.....G. G. Dowdall
Delegate to State Meeting.....J. C. Myers
Censors.....J. C. Myers, J. M. Wilcox and D. W. Edmiston

The DeWitt County Medical Society convened in annual session in the county court room April 12, 1904, at one o'clock P. M. Pres. J. C. Myers in the chair.

Symptoms of **smallpox** was discussed. Dr. G. G. Dowdall said he knew of no eruption

occurring on the palms of the hands and the soles of the feet except in smallpox.

Dr. Spaulding reported a case of **malarial fever**, of a peculiar character which did not yield readily to quinine—in a young man who had just returned from Hot Springs.

Dr. G. S. Edmonson reported a case of **pneumonia followed by gangrene of the lungs** which is now convalescing. All members participated in a discussion of same.

Dr. D. W. Edmiston read a paper on **Man vs. Vitalization**, giving an extensive view of the geological formation of the world through its different periods until oxygen was the prevailing element after which man made his appearance.

On motion the society proceeded to elect officers for the ensuing year which resulted as above.

The society adjourned to meet the second Tuesday in July.

CHRISTIAN COUNTY MEDICAL SOCIETY.

Regular meetings are held at Taylorville. Membership 20.

Officers.

President.....W. T. Bridges, Stonington
Vice-President.....Matt Hill, Taylorville
Secretary and Treasurer.....F. E. North, Taylorville
Directors.....C. L. Carroll and G. L. Armstrong, Taylorville; M. W. Staples, Grove City.

The above named officers were elected at a meeting held at Taylorville, April 15th.

PULASKI COUNTY MEDICAL SOCIETY.

Regular meetings are held in Mound City the first Tuesday in January, April, July and October. Membership 16.

Officers.

President.....W. C. Rife, Villa Ridge
Vice-President.....C. J. Boswell, Mounds
Secretary and Treasurer.....A. W. Tarr, Grand Chain

At our last regular meeting held on April 5th, Dr. Hall Whitaker of Mound City read a valuable paper on **the treatment of abortion** which was discussed by most of the members present.

Dr. M. L. Winsted had a lengthy paper on **Radium** which was much enjoyed.

The prevailing diseases in our county this spring are pneumonia and measles.

Am glad to report a good attendance at our meetings and harmony among the physicians of this county.

WASHINGTON COUNTY MEDICAL SOCIETY

Regular meetings are held at Nashville on the second Thursday of April and October. Membership 13.

Officers.

President.....J. J. Troutt, Nashville
Vice-President.....R. E. Vernor
Secretary.....David S. Neer
Treasurer.....S. P. Schroeder

The Washington County Medical Society met in regular session at B. B. Holston's office in Nashville. The president and vice-president being absent, Dr. David S. Neer of Beaucoup presided. After reading the minutes of the preceding meeting and a communication from

the committee of the American Medical Association on Medical Legislation the Society proceeded to elect officers for the ensuing year. See above.

The Society voted to hold two meetings a year instead of four. The meetings to be held the second Thursday in April and October. George S. Hays of Oakdale was elected to become a member of the society. Dr. W. D. Carter read a very interesting paper on **Traumatic peritonitis** and reported four cases from memory. Dr. R. A. Goodner made a verbal report on the **treatment of gonorrhoea by the use of Argyrol**. He claimed the results were more satisfactory than any treatment he had used before. Dr. S. P. Schroeder reported a case of **rheumatism in connection with abscess of the thigh**. The doctor believes the absorption of certain products of the streptococcus will produce rheumatism.

CASS COUNTY MEDICAL SOCIETY

Regular meetings are held quarterly on the third Wednesday of January, April, July and October. Membership 20.

Officers.

President.....M. J. Palmer, Beardstown
1st Vice-President.....L. M. Sinker, Ashland
2d Vice-President.....C. J. Koontz, Beardstown
Secretary.....J. A. McGee, Virginia
Treasurer.....J. G. Franken, Chandlerville

The Cass County Medical Society met in Virginia, Wednesday afternoon April 13th for its annual meeting, but owing to press of business among the members, but few were present. The order of business was gone over, several of those present making some remarks in regard to cases seen, and under treatment. The election of officers resulted as above.

Dr. Franken, treasurer, report was read showing a balance of \$26.71 in the treasury. The next meeting will be held in Beardstown, for which plans are already on foot to induce members to attend the meetings more regularly, and it is hoped that much may be accomplished in this line

ROCK ISLAND COUNTY MEDICAL SOCIETY

Regular meetings are held monthly at Rock Island on the second Tuesday. Membership 56.

Officers.

President.....L. D. Dunn, Moline
1st Vice-President.....G. A. Wiggins, Milan
2d Vice-President.....W. L. Ludewig, Rock Island
Secretary.....T. J. Lamping, Moline
Treasurer.....L. Ostrum, Rock Island
Official Reporter.....F. H. First, Rock Island

The regular meeting was held at the Harper House, Rock Island, April 12, 1904. Twenty-nine members being present. This being the annual meeting the officers were elected for the ensuing year. See above.

Dr. W. R. Freck of Cordova, the retiring president, was elected delegate to the State Medical Society, with Dr. L. D. Dunn of Moline, as alternate. After the election the society had the pleasure of an address by Dr. Carl Black, of Jacksonville, president of the State Society, who took for his subject **Medical Organization**. He spoke of the early State Medi-

cal Society and the advantages and influence of the present state organization.

Following Dr. Black's remarks was an address by Dr. J. F. Percy of Galesburg, counselor for the societies in this district, who spoke on **the advantages to physicians in organization**.

The addresses of Dr. Black and Dr. Percy were very much enjoyed by the society.

The following resolutions were adopted:

Whereas, The Rock Island County Medical Society hears with regret the death of Dr. Charles C. Carter, a highly respected member of our society, who in his profession stood deservedly high and was universally respected by all who knew him; therefore, be it

Resolved, That the profession has lost one of its best and most competent practitioners and a conscientious friend of this society.

Resolved, We tender our heartfelt sympathy to the members of his family and mourn with them a loss which cannot be expressed by words.

Resolved, That these resolutions be spread in full upon the minutes of this society and a copy be forwarded to his family.

The next meeting of the society will be held the second Tuesday of June.

F. H. First, Official Reporter.

HANCOCK COUNTY MEDICAL SOCIETY.

Regular meetings are held at Carthage the first Monday of January, April, July and October. Membership 24.

Officers.

President.....C. A. Runyon, Elvaston
Vice-President.....J. H. Callahan, Carthage
Secretary.....R. L. Casburn
Treasurer.....R. R. Loomis, Burnside
Censor.....C. L. Ferris, Carthage

The Hancock County Medical Society met in the north jury room in court house, Monday, April 4th, at 1 P. M. Members present: Dr. Reaburn, Nice, Callahan, Ferris, Jenkin, Ellis, Loomis, Yarnell and Casburn. Dr. W. P. Frazier present and united with the society by card from the Fulton County Medical Society. Drs. Roberts, McCormick, J. A. Miller, C. R. Hecox, S. R. Denton and G. W. Fegers also present, and were elected to membership in regular form. Dr. Wm. Rankin, of Basco present and petitioned for membership.

Committee on hospital reported that the society had been incorporated and measures taken by which it was hoped that funds would be raised for the construction of the hospital. Report received and committee continued.

In the matter of a **pure food bill** now pending before the United States senate, resolutions were passed commending the bill and instructing the secretary in the name of the society to write to Senator W. B. Heyburn, chairman of the committee that has the bill in charge, and to both our United States Senators, urging them to use their influence to secure the passage of the bill.

Dr. Reaburn read a very interesting paper on the **history of the society**. After discussing

many matters of interest the society adjourned to meet again, the first Monday in July.

Dr. Reaburn offered the following resolutions which were adopted:

In Memoriam.

At a meeting of the Hancock County Medical Society, held in Carthage April 4, 1904, the following preamble and resolutions were reported and adopted:

Whereas, Dr. Jas. W. Carlton, Dr. R. J. Grigson, Dr. David Ellis, and Dr. Virgil Kingsley, who were honored and esteemed members of this society, have answered the last call and gone to their respective rewards.

Resolved, That in the death of these worthy members of this society, the medical profession and the communities in which they moved have sustained a great loss, that they were recognized as physicians of skill and ability, that we desire to inscribe on the records our deep sorrow and tributes to their memory, that we extend words of condolence to their respective families in their abiding bereavement.

Resolved, That a page on the records be set apart for these resolutions.

HAMILTON COUNTY MEDICAL SOCIETY.

Officers.

President H. E. Hale
First Vice President I. M. Asbury
Second Vice President Harry W. Dale
Secretary and Treasurer C. M. Lyon
Board of Censors: W. W. Hall, J. J. Hassett and Inman Hall.

The Hamilton County Medical Society met in regular session, Tuesday, April 19th, at the office of Dr. I. M. Asbury in McLeansboro. Present: Drs. H. E. Hale, President, W. W. Hall, I. M. Asbury, J. J. Hassett, Harry W. Dale, and C. M. Lyon, Secretary. Minutes of last meeting read and approved. On motion of Dr. J. J. Hassett, Dr. Inman Hall was elected a member of the society. Officers for the ensuing year were elected as above.

The President appointed as a board of censors, Drs. W. W. Hall, J. J. Hassett and Inman Hall.

Interesting cases were reported by Drs. Hale and Hassett, and discussed by Drs. Asbury, Inman, Hall and H. W. Dale. On motion the society adjourned to meet at Dahlgren on the second Tuesday in July, at one o'clock P. M.

C. M. Lyon, Secretary.

GALLATIN COUNTY MEDICAL SOCIETY.

Regular meetings are held the second Wednesday of each month. Membership, 16.

Officers.

President.....I. N. Bourland, Equality
Vice-President.....I. A. Foster, New Haven
Sec'y and Treasurer..W. H. Grattan, Shawneetown

Society met at Ridgway, April 14. Minutes of last meeting were read and approved, after which Paul Sherman was elected a member.

There being no papers to read interesting subjects were discussed. On motion a committee of two, consisting of a Democrat and Republican, was appointed to confer with our law-makers on all matters in which the medical

profession is concerned and that the committee and each member as well pay especial attention and use all their influence for the passage of "Heyburn's Pure Food Bill."

Meeting adjourned to meet at Omaha second Wednesday in June.

EAST ST. LOUIS MEDICAL SOCIETY.

Officers.

President.....H. Hanson
Vice-President.....C. A. W. Zimmermann
Secretary-Treasurer.....C. W. Lillie
Censors.....Campbell, Hertel and Bottom

The East St. Louis Medical Society met in annual session on April 4, 1904, President C. F. Whitmer in the chair, and C. W. Lillie, secretary. Roll call showed the following members present: Campbell, W. S. Wiatt, Collins, Zimmermann, Bottom, Hanson, Hertel, Stanton, Wiggins and Voris.

The report of the secretary and treasurer was read and on motion accepted.

The committee appointed at a previous meeting to report a means to prevent druggists prescribing was not able to report.

President Whitmer announced election of officers for next order of business and appointed Hertel and Campbell tellers. The officers were elected as above.

Moved by Lillie, seconded by Campbell, that all members who are in arrears for dues for two years or more, and who have not attended a meeting of the society in the past year, or have removed from the city, be dropped from the roll of membership. The motion prevailed.

Dr. Wiggins made a very interesting report of a case of ectopic pregnancy in which a secondary operation was done for severe pain in region of original operation. No good results followed as no cause could be found to account for the condition except a peritonitis, to which the trouble was then attributed. The abdomen was closed and a few hours later the patient died. At autopsy it was found that there was a stricture at about the distal termination of the duodenum, although there was almost as much distension below as above this point, a condition rarely met with in intestinal constriction or obstruction.

Dr. Campbell is to present a paper on peritonitis at the next meeting.

Society adjourned.

C. W. Lillie, Secretary.

New Incorporations.

Radams Microbe Killer company, Chicago; dissolved.

The Secretary of State at Springfield licensed the following corporations:

Vapor Medicator company, Chicago; capital increased from \$2,500 to \$10,000.

The Ma-Jes-Ca company, Chicago, \$5,000; manufacture and sell medicines; Mabel T. Mallette, Jessie Louise Elliott, and Willard E. Carpenter.

The Fred B. Hargreaves company, Dwight; \$2,500; maintain hospitals and sanitariums; William H. Ketchum, Clyde H. Thompson, and George L. Taylor.

First National College of Human Nature, Chicago; capital, \$1,000; teaching vitosophy, optometry, ophthalmology; incorporators, Henry Krause, Emma J. Steinfurth, Robert H. Smith.

Marriages and Deaths.

Marriages.

J. C. McEnery of Jacksonville and Miss Mary Milligan of Chicago, April 7th.

Geo. A. Potter and Miss Mae Belle McCoy, both of Danville, April 8th.

Thomas W. Priest of Buffalo Hart and Miss Lucy M. Burns of New Berlin, April 14th.

Victor H. Rimerman of Lincoln and Miss Estel R. Daviess of Pekin, April 5th.

Kellogg Speed and Miss Bertha A. Brown, both of Chicago, April.

Deaths.

Carter, Chas. C., Rock Island, April 2, aged 52. Dr. Carter was sick with pneumonia only six days. He was Asst. Surgeon General of the Illinois National Guard.

Goold, Birney R., Chicago, March 29, aged

Heller, Wm. H., Abingdon, April; aged 82. Dr. Heller had practiced medicine in this State 58 years.

Higgins, John, Crown Point, Indiana. Dr. Higgins was surgeon of the Twelfth Illinois Infantry during the civil war.

Kerr, Chas., Springfield, April 13, aged 67. Dr. Kerr served as assistant surgeon of the 59th Illinois Infantry. He was a member of the Lower House in the 34th General Assembly and a candidate for Congress in 1888.

Prescott, Elmer E., Chicago, April; aged. Dr. Prescott died in his hospital at Des Plaines and Washington sts., from an overdose of atropine.

Schottenfels, Emil, Chicago, March 31, aged.

Skelly, John L., Pekin, April 10, aged 59. His death was due to apoplexy.

Stringer, Charlotte T., Chicago, April 1, aged.

OBITUARY.

IN MEMORIAM.

Dr. Charles Crawford Carter, of Rock Island, Ill.

Perhaps the saddest moments which come to us in this brief span of mortal life are those when death comes to break the ties which life and association have woven into bonds of personal love and friendship. The realization of this thought comes most profoundly to those of

us who have been most intimately associated with our late confrere and colleague, Dr. Charles Crawford Carter whose untimely death but a few days ago, so shocked the community in which he lived.

Charles Crawford Carter was born in San Francisco, Cal., December 20, 1852, the son of Elijah and Ann Maria Whitney Carter. His father was a native of Vermont, his mother of Massachusetts, both descendants of that rugged stock of Puritans who early settled on the New England coast.

His father was one of the Argonauts of '49, going to seek his fortune in the golden sands of California, it was during the residence of his parents there that he was born. When he was about three years of age, having been quite successful in their search for fortune his parents removed to Rock Island, Ill. Where he grew to early manhood, when he took up the study of medicine. His preliminary education was public school and academical.

He began the study of medicine in 1873, as a pupil of Dr. James Orne Whitney, of Pawtucket, Rhode Island, his uncle, a practitioner of the old school, who looked upon his work as a profession not a business, and whose dignified precepts and example no doubt had large influence in forming that high sense of professional honor and courtesy which so markedly characterized Dr. Carter in his relations to his patients and confreres.

He graduated in 1876, from Bellevue Hospital Medical College, New York. Some ten years afterwards, when his years of practical experience made him peculiarly capable of absorbing and assimilating the instruction given he took an extended Post-Graduate Course in New York.

He was married to Mary Whitney of Pawtucket, Rhode Island, in 1887. To him and wife there were born six children, four of whom died in early infancy. Two surviving their father's death, Richard, thirteen years of age, and Crawford, seven. Of his immediate family there also survives his wife, two sisters and one brother.

Dr. Carter was a member of the American Medical Association, Illinois State Medical Society, Rock Island County Medical Society and various other special Medical Associations, at whose meetings he was a frequent and regular attendant.

He was early identified with the National Guard of Illinois and served as surgeon in that organization for more than twenty years, being at the time of his death and for a number of years preceding Assistant Surgeon General, Illinois National Guard.

He began the practice of medicine in Rock Island, Ill., in the spring of 1876. It was here that the writer also just beginning his professional career in the same city first made his acquaintance. That acquaintance first made in the flush of youthful hope and endeavor, ripened through the years of personal and profes-

sional association into a warm friendship that no friction ever disturbed.

The writer believes that he can pay no higher tribute to Charles Carter's professional character than to say that in the twenty-eight years of his professional life he never knew him other than a high minded, upright and conscientious physician whose conduct to his brother practitioners seemed largely founded upon those admirable principles of the Golden

friend and one whose friendship never faltered. He was strong in his feelings and convictions, but thoroughly honest in his expressions of them and his heart was full of charity for all.

It will be hard to fill the void that he has left, but all who have shared his friendship must feel that his life has added to their happiness and that his memory can never fade. After all what greater honor, what more noble title may a man attain than that of the family



Charles Crawford Carter.

Rule, that unfortunately so few have the courage to follow.

As a practitioner, Dr. Carter was astute in diagnosis, careful, judicious, painstaking and successful in treatment. His opinions were rapidly but accurately formed and showed a breadth of knowledge indicative of his devotion to his profession.

To his patients he was always the kind and genial gentleman which endeared him to the many whom his pleasant smile had lighted through the dark valley of pain and sickness.

In his private life his friends will miss him much, for he had many friends. He was a man singularly attractive and of singular sweetness of disposition and of a most liberal spirit.

He was an interesting talker and in his conversation he showed much familiarity with many and diverse subjects. He was a good

physician. Perhaps at times misunderstood and undervalued, but in the end loved and honored by the grateful hearts of those to whom he has brought the healing power of medicine.

"No laurel decks thy brow, but when thy spirit true,

Thy comrades showed the way to live and do
There lies thy form enthroned in every heart
There, thou art still and hast, in life a part.
On the low couch within the chamber dim,
A sufferer waits the last long struggle grim,
Thou comest it is light, and sorrow disappears,
Pain is forgotten, hope replaces fears.

So happy makes thy face, so brave thy kindly glance

The touch of thy loved hand brings ease and confidence,

And, what with sordid gold can not compare,
The tears of gratitude reward thy care."

—George L. Eyster.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street.....	President
FRANK X. WALLS, 4307 Ellis Avenue.....	Secretary
A. E. HALSTEAD, 2937 Indiana Avenue.....	Treasurer
W. A. EVANS, 103 State Street	Chairman Medicolegal Committee
WM. HARSHA, 103 State Street	Chairman Membership Committee

MAY, 1904.

The Chicago Medical Society met in regular session March 16th.

On the Accessory Sinuses.

W. T. Eckley: The accessory sinuses in man, occupy the pneumatic bones. In the lower animals, pneumatic bones are subsidiary organs of respiration, hence phylogenetically, the sinuses in man are respiratory.

In the lower animals, the pneumatic bones receive air in proportion to the functional activity of the related parts, hence they are to be regarded as special respiratory organs for these parts. In man the pneumatic bones are in the head, hence the accessory nasal sinuses of man, are to be regarded as special respiratory organs for this region.

In the amphibia, the accessory nasal chamber—homologous with the maxillary sinus of all vertebrates—contains a part of the olfactory organ, hence in man the maxillary sinus may be regarded as a phylogenetic olfactory organ.

In birds and mammals, the sinuses are absent at an early stage of life. In adult birds, the sinuses impart tone and strength to song, hence as mating factors in birds, the sinuses are subsidiary to procreation.

In man, the sinuses prior to puberty are in an undeveloped state—puberty in man is the phylogenetic "period of mating" in the lower animals. The unstable voice of youth, as well as the nasal character of voice in diseased adult sinuses, confirms these latter as subsidiary vocal organs.

The sinuses in birds and mammals develop *pari passu* with the generative organs. Prior to the completion of this strange duality, the lower animals remain unmated units—the higher animals are innocently unconscious of their sex. Great orators and vocalists are post-pubal products, hence the simultaneity in development of sinus and indifferent sexual gland, should be regarded as more than a mere coincidence. The intimate and unaccountable relation of sinuses to generative organs, suggests the solution of a problem looking to the reciprocal influence on these respective organs, of disease and surgical operations.

In their development the higher vertebrates pass through transitory stages, which in some of the lower animals become fixed structural

characters. As a diagnostic expedient, early recognition of structural departure from the normal in man, is desirable. In the floor of the antrum of man, an elevation of variable height, producing antral pockets, represents in the horse a permanent partition, separating the anterior from the posterior antrum. Conchal sinuses, occasionally encountered in man, are permanent characters in the horse; while in man, an accessory ostium maxillare, opening into a conchal sinus is simply a reversion to a fixed structural character in the ox and horse. Those rare instances in man, of palatal and lachrymal sinuses and bulla ethmoidalis, communicating with the antrum of Highmore, are survivals of a constant condition in *bos domesticus*; likewise survive in the sinuses of man, those trabeculae, which in birds, give strength to the walls of pneumatic bones.

The sinuses, like the liver, pancreas, lungs and kidney, are products of evagination, and such products partake of the nature of the source from which they are derived. Just as kidney partakes of the nature of antecedent mesonephric duct, and lung, liver and pancreas resemble the alimentary canal, so do the accessory sinuses partake of the nature of the nose, from whose outer wall they were originally evaginated. The route pursued by an evaginating organ, subsequently forms the excretory duct of this organ. Polyevaginations may occur; as for instance, multiple bile duct, double processus vaginalis, bifid infundibula, or two or more openings for the antrum. Evaginated structures are inconstant in size, their ducts may be large or small, and they are ever liable to share an infection with the parent cavity.

Evagination of the membraneous maxillary sinus in the amphibia, carries with it neuro-epithelial cells; hence in *these* animals, this cavity has an olfactory function. In those reported cases in man in which sense of smell persists after the destruction of the nasal olfactory territory, a possible explanation of such persistence would be clearly along the line of reversion to the fixed structural characters of a type of animal, lower in the scale than man.

Each accessory nasal sinus, like the internal ear, consists of a membraneous, ectodermic lining, and an osseous mesodermic protective; hence the distinction between membraneous

and osseous sinuses should be as clear to the rhinologist as the distinction between membranous and osseous labyrinths is to the otologist. The perilymphatic space of the ear is embryologically analogous to the lymph space between the membranous and osseous parts of the nasal sinuses.

Of pneumatic bones, Hunter says: "In birds of flight, (the volatores) the wing bone in the skeleton contains air in communication with air in the lungs, via of air-sacs in neck, thorax, pelvis, abdomen and intermuscular spaces. The air renders the body specifically lighter, aids mechanically in the action of the lungs, and purifies the blood as does air in the lungs."

According to Owen, the quantity of air admitted into the system, is proportional to the rapidity and continuance of flight; it is distributed to those members most employed in locomotion as to the wing-bones of the owl and to the femur of the ostrich.

Not all birds are volatares, hence some birds as those that move from place to place, principally by land, have less extensive respiratory expedients in the bones of the wings, than have birds of flight. Mere abbreviation of a respiratory system extending to wing bone of the skeleton in aerial animals, does not militate against the validity of the system in terrestrial animals, in which comparatively few bones are pneumatic. The subsidiary respiratory system under consideration simply contemplates **bones containing air in free communication with the lungs.** The number of bones may be great or small; the respiring animal may inhabit air, earth, or water. The function of the pneumatic bones is aeration, founded on the law of diffusion of liquids and gases. The final respiratory results may be maximal in one case and minimal in another. Pneumatic bones are always to be regarded as the local respiratory organs of the region in which they occur. In the elephant all the head-bones are pneumatic; in man, certain bones only, of the head, are air-containing, but in principle, the sinus-system in man is a reversion to a necessary subsidiary, respiratory system in birds.

Owen's statement regarding the distribution of air to organs in proportion to their functional activity, has a cogent application to the sinus-system in terrestrial vertebrates, including man of course. In these, the active parts near the sinuses are the brain and muscles of mastication. Blood from the respiratory field of the sinuses and from the mandibular region, reaches the pterygoid plexus, which latter, communicates with the sinuses of the dura mater via certain emissary veins. Blood reaching the pterygoid plexus from the accessory sinuses, is oxygenated, that reaching it from other sources is not. The sinus system in man is subsidiary to the pulmonary respiratory system, and forms the mammalian link in the most fully expanded respiratory panoply of air-breathing animals.

Clinical evidence having bearing on the subsidiary respiratory function of the sinuses is not wanting. Dr. C. M. Robertson of this city, in an article on "Headache from Non-Suppurative Inflammation of the Accessory Sinuses of the Nose," in commenting on an author's

theory that headache in this class of cases is due to air pressure in the sinus, says: "The pain seems to me, however, to be produced by a diminution of air pressure in the sinus. This diminution in pressure is caused by obstruction to the entrance of air to the particular sinus, by closure of its natural orifice. For instance, the middle turbinate may be swollen from inflammation; the swollen body obstructs the sinus so that the cavity is shut off from the nasal chambers. The imprisoned air loses its oxygen from absorption by the blood vessels in the mucous membranes of the cavity."

That pain ensues on suppression of oxygen for a prolonged period, is a physiological truism. The local manifestation of this pain in the head in one patient, and in the pelvic distribution of the pudic nerve in another patient, finds its anatomical justification in superior qualities of the trigeminus and pudic nerves respectively, for reporting the pain. Fothergill says: "Pain is nature's cry for pure blood."

In general asphyxiation, bodily pains cease when the patient gains atmospheric air; in headache, due to an occluded ostium maxillare, the pain ceases according to clinical experience if the opening becomes patent. The two conditions of pain differ in degree only. Each is causatively related to the same common suppression of oxygen, and in each the turgescence and other local symptoms in the mucous membrane of sinus and bronchial tree would seem to be a sequence rather than a cause of the pain.

The simplest olfactory organ in all the true fishes, is a single, paired, ectodermic depression above the mouth. The most highly specialized organ of smell in fishes, consists of a spindle of neuro-epithelial cells with an independent disconnected sac. This sac foreshadows the sinus system in the higher vertebrates, and in the amphibia becomes an olfactory organ.

In the amphibians the olfactory organ divides into a nasal part and an accessory nasal chamber. In some cases the two parts are entirely separated and each has its own olfactory nerves.

"There can be no doubt," says Wiedersheim, "that the accessory nasal chamber in the amphibians is homologous with the maxillary sinus of all vertebrates. In no other vertebrates, however, does it retain the character of a kind of separate nasal chamber, but on the contrary, the higher we pass in the vertebrate series, the more does the maxillary cavity become separated physiologically from the olfactory organ; it loses its olfactory epithelium and finally degenerates into a simple air-sinus."

The pneumatic bones of man are confined to the head. They contain after childhood, air cavities communicating with the nasal portion of the respiratory system which are variously designated cells, sinuses and antra. The naming is founded rather on differences in size than on inherent structural peculiarities, for they are similar in location, development, nutrition, function and liability to local and

constitutional disorders. The sinuses are accessible from without, and on this accessibility doubtless depends the frequency of their invasion by disease as well as the refined technique of their medical and surgical treatment.

The accessory sinuses are evaginations of the nose, hence their epithelia are of ectodermic origin. They partake of the nature of the nose for evident embryologic reasons, hence the great similarity between morbid processes in them and in the parent cavity—the nose.

In man the sinuses occur in the frontal, sphenoid, ethmoid and maxilla. They admit of general, not of specific limitations. They are variable in size in different races—in people of the same race, and even in the same individual, the sinuses of the sides may differ.

In conformity with the general biologic rule, the openings of the sinuses may occur doubly, in this regard reminding one of a double ureter for a single kidney, or of a supernumerary process vaginalis. The ostium maxillare, like the openings of the remaining sinuses, vary much in size within physiological bounds, for the evagination routes of evaginated structures are amenable to no known law regarding size.

Sex exerts no important influence over the sinuses, in regard to size, level or excretory openings. Clinical experience and post mortems do not justify the statement that the floor of the antrum in women is above, in men, below the floor of the nose.

The sinuses in man are tardy in appearance, and with no demonstrable reason, develop simultaneously with the generative organs. As the genital conduits in male and female announce their completed canalization by pollution and ovulation respectively, so the sinuses announce their completion by adult quality of voice.

The sinuses are provided with a vascular mucous membrane continuous with that of the nose, and which, compared with that of the parent cavity, is weak, pale, flabby and detachable—negative qualities, probably superinduced by loss of olfactory function and intramural environment. The sinuses are supplied by the ethmoidal, sphenopalatine, descending palatine, vidian and pterygopalatine arteries. These arteries and their corresponding veins form a capillary plexus which communicates by several routes with the venous blood in the sinuses of the duramater of the brain.

At birth, the frontal sinus is absent; the maxillary sinus is a shallow groove on the outer wall of the nasal fossa; the ethmoid cells are small depressions and the body of the sphenoid has no trace of air-cells.

The frontal sinus is innervated by the supra-trochlear branch of the frontal nerve, the maxillary by the posterior superior dental; the ethmoidal and sphenoidal by Meckel's ganglion; the bony walls of the sinuses, like bone in general, by gray rami communicantes.

Disease in the sinuses, according to the law of radiation of pain from trigeminus to cervical nerves, may produce reflex disturbances in diaphragm, head, neck and upper extremity. Conversely, lesions in the distribution of the

cervical nerves may produce reflex pain in the distribution of the trigeminus.

Anatomically, looking to the greatest conservatism of the teeth, operations on the antrum via the anterior wall, are unjustifiable, on account of the necessary destruction of dental vessels and nerves. A devitalized tooth-pulp is conducive to early decay of the tooth. The operator should never sacrifice a sound tooth in operations on the antrum. The only absolutely safe route, under every circumstance, is via the nose.

The mucous membrane of the sinuses is vascular and its capillaries are in communication with the venous blood of the brain and pterygoid plexus, thus forming a means of limited local oxygenation of blood.

The sinuses in man are more frequently diseased than in the lower animals. It would be interesting to know the ratio of healthy dentures to diseased antra, if, indeed, diseased antra, and sound teeth ever inhabit the same host. Equally instructive were statistics giving the relative frequency of antral disease to inflammatory affections of eye, ear and nose. Following operations, the mucous membrane of the sinuses regenerates slowly in comparison to the rapid regeneration of the mucous membrane of the nose, following like trauma. The proximity of the internal carotids to the sphenoidal sinus in some cases, renders operations on this sinus, anatomically unjustifiable, since no operator can foresee the danger, in any case, of injury to the arteries. Operation on the sphenoidal sinus consequently violates the law relating to ordinary care and ordinary skill.

In reply to an inquiry regarding the sinus in the domestic animals, I received the following information from John R. McNeal, Professor of Anatomy and Surgery in the Department of Veterinary Medicine, University of Iowa:

"The function of the sinuses in the domestic animals has not been definitely determined. Evidence that they have anything to do with respiration or olfaction, is wanting. They do, however, increase the volume of the head, thus supplying a large surface for the attachment of facial muscles.

"In early life the sinuses are but incompletely developed, and those about the dental arches contain the roots of the molar teeth. They increase in size (a) by absorption of bone; (b) by the downward growth of the teeth.

"The four superior sinuses communicate, hence infection of one means infection of all. The inferior maxillary sinus, separated from the superior maxillary sinus by a thin bony septum, may or may not be involved in infection of this latter. The superior and inferior maxillary sinuses communicate with the nasal fossa through an elongated slit at the opening of the superior portion of the middle meatus. The cavity of the anterior turbinated bone is a continuation of the frontal sinus; the inferior maxillary sinus communicates with the cavity of the posterior turbinated bone.

"Infection of the sinuses may be due to (a) glanders nodules on the mucous membrane; (b)

degenerated tumors of the sinuses; (c) purulent inflammation due to the streptococcus of Schutz, and known as the streptococcus of Strangles; (d) alveolar periostitis, due to unequal wear of crown, or necrotic or splintered tooth. (The 4th molar is most commonly involved, and, since its roots may extend into the partition separating the two maxillary sinuses, these may both be involved). (e) Fracture of the maxillary bones.

"The condition causing empyema of the sinuses in animals in captivity, differ from those causing like diseases in animals in the native state, only in the nature of the food and its influence upon the teeth. In most cases of empyema, the mucous membrane is thickened and indurated, and granulations may be confidently expected to fill the remaining space in the sinus. The ethmoidal cells are seldom involved primarily, but may be involved secondarily by extensions from the frontal sinus."

Anatomical Questions for Rhinologists.

1. In what percentage of diseased sinuses have you noted reflex motor or sensory phenomena in the peripheral distribution of the 5th cranial and cervical nerves?

2. As a rule, in diseased sinuses, does the patient have pain in the teeth, either sound or carious?

3. Have you encountered cases in which reflex earache resulted from local disease of the sinuses?

4. Have you met cases of spasticity of muscles of mastication, due to primary or secondary inflammation of the sinuses?

5. Does pregnancy produce the same reflex phenomena in the sinuses, as frequently occurs in the gums and teeth?

6. In operations on the antrum of Highmore via the anterior wall, what influence on the incisor teeth follows destruction of the anterior superior dental vessels and nerves?

7. In operations on the sphenoidal sinuses, has the internal carotid artery every been injured? In some cases the artery is separated from the sinus cavity by the mucous membrane only.

8. How long after obliteration of the antrum or frontal sinus by inflammation, before marked changes in vocalization begin to occur?

9. Have you had experience in cases in which the sense of smell persisted, after destruction by trauma or disease, of the nasal olfactory region?

10. In what percentage of cases are diseased antra due to diseased teeth? May antral disease extend to, and infect the teeth and gums?

11. Does removal of the Gasserian ganglion have any marked trophic influence on the sinuses?

12. Is there any constant relation between neuralgia of the 5th nerve and disease of the sinuses?

13. What changes occur in the sinuses, as a result of (a) loss of all the upper teeth: (b) true ankylosis of the temporo-mandibular articulation?

Conclusions.

The accessory sinuses of the nose in man, are phylogenetically very ancient structures, and figure physiologically as feeble, subsidiary, respiratory organs.

The maxillary sinus in the higher vertebrates, has its prototype in the amphibian accessory nasal chamber, in which it was an olfactory organ; hence, phylogenetically the antrum in man is an obsolete organ of smell.

For as yet unaccountable reasons, the sinuses develop *pari passu* with the generative organs, and there is evidence of an intimate physiologic relation between these remote anatomic organs.

The variations, even in healthy sinuses, are so great, that it were hazardous to attempt an analytical classification looking to definite size, shape, or openings. For embryologic reasons, each sinus is a law unto itself.

The sinuses are supplied by the trifacial nerve; hence, reflex phenomena between them and the peripheral cervical nerves is possible.

As a diagnostic expedient, the specialist should always bear in mind the possibility, in the sinuses of man, of reversion to structural fixed types in the lower vertebrates.

Operations on the sphenoidal sinus are anatomically unjustifiable ones. Sound teeth should never be sacrificed, and the nasal route for gaining entrance to the antrum is never dangerous.

979 West Jackson Boulevard.

Dr. Talbot's Discussion.

Eugene S. Talbot, with lantern slides, showed the evolution, embryology, period of stress and the method by which arrests of the face, nose, jaws and teeth are produced. These arrests and excessive developments are due to an unbalanced nervous system. He also showed the two typical forms of faces in neurotics and degenerates in which these deformities are always present.

While making examinations of skulls in this country and Europe some two decades ago, especial attention was given to abscessed and diseased antra due to dead pulps in the teeth.

Of the 11,000 skulls examined for deformities, only 3,000 were in a broken condition, so that the antra could be examined, making 6,000 antra in all. Of this number 1,274, or about 21 per cent, had abscessed molar teeth. Of this number 76 or about 6 per cent, extended into and apparently discharged into the antrum.

M. H. Fletcher examined 500 skulls making 1,000 antra. He found 252 upper molars abscessed making 25 per cent of antra which have abscesses in this locality. Out of 252 possible cases perforation into the antrum was found only 12 times. Thus showing over 4½ per cent of abscessed teeth in this locality which are connected with the antrum.

Many of the older practitioners of dentistry have never observed a single instance where an alveolar abscess has perforated the antrum. This statement, however, must be taken with some allowance, since the older practitioners

were not good diagnosticians of pathologic conditions. M. H. Fletcher, found in 224 cases of pulpless molar teeth only one case of pus in the antrum.

In the treatment of 367 cases of pulpless teeth in connection with the superior molars in the past twenty-two years, I found only three cases of diseased antrum, making less than three per cent. Taking therefore, the large number of teeth treated by dentists because of dead pulps and alveolar abscess, the number of diseased antra due to alveolar abscess is very small.

Thomas L. Gilmer: My experience may have been a peculiar one, in that it has been somewhat different from that of Dr. Talbot, and it may be accounted for on account of his having examined pre-historic skulls which were not those of degenerates. The skulls that I have examined however, were not those of degenerates, so far as I could judge. Last night I examined sixteen unselected skulls, which were placed in my hands by Dr. Eckley, and in that number I found three in which the buccal roots had penetrated the antrum of Highmore. There were a few of these in which the bony walls were left intact, so that I could not make an examination of the antrum, therefore more of them may have had penetrations. In one there was evidence of an abscess from a tooth which had destroyed the bone and opened into the maxillary sinus. In my clinic I find cases continually of abscess of the roots which have penetrated the antrum of Highmore which in some instances have been the primary cause of empyema. I should say, that I see at least two or three or more such cases in a month.

With regard to the teeth having been previously lost in cases of empyema, as said by the last speaker, my experience teaches me that this is not generally the case, but rather in the majority of cases that they are in place and in many instances not badly decayed.

Dr. Eckley has asked the question whether or not the pulps of teeth may be destroyed as the result of empyema or a diseased condition of the lining of the maxillary sinus. We find occasionally what are considered sound teeth, that is teeth not decayed, in which the pulps are dead, with no external attributable cause, and in such instances it is possible that inflammation of the lining of the antrum has extended to the pulps of the teeth, with destruction of the nerve and blood vessels of that organ. If the roots of the teeth penetrate the floor of a sinus involved in an empyema there is every probability that their pulps will be destroyed, and even if the primary cause of the empyema be removed, unless the roots be also removed, it will be continued by the toxic elements from the roots.

In regard to making the external opening, I do not think Dr. Ballenger intended that it should be made so near the median line as his clay model indicates, as he knows the bone is much thicker here; it should be made a little farther back, that is between the second bicuspid and first molar, or just above these teeth, as the bone at this point, especially in

older people, is very thin and an opening is easily made here. The cheek falls over the opening and closes it, so as to prevent particles of food from passing into the sinus. I do not see why an opening made at that point would cause a secondary infection of the antrum any more readily than it would if the opening were made from the nose. It is true we have many micro-organisms in the mouth, but I doubt if there are more of the pyogenic forms in the mouth than in the nose and certainly not as many of the influenza bacillus which is so often found in the discharges from the antrum. If the opening in the sinus is made for the purpose of curetting certainly the roots through the buccal will afford a better opportunity for this, than does the nasal.

Albert B. Hale: In performing the Killian operation, if one has once injured the superior oblique, he might as well give up all hope of restoring function. That is a point to be remembered by everyone who is bold enough to undertake this operation. If the seventh nerve is injured by the general surgeon in attacking the mastoid, the otologist has a right to blame him for invading a field not perfectly understood, and the otologist should not be expected to repair the errors of his inexpert confere; in the same way if the superior oblique is injured by the rhinologist in performing this operation, he must assume the responsibility and acknowledge that the eye surgeon cannot so easily correct any impairment which may follow.

Dr. Arthur D. Black: There is one point I wish to refer to, namely; the statement that pulps of teeth may die in cases where operation has been done through the anterior wall of the antrum. I have operated a number of such cases and have seen scores of cases operated in that way, and yet have never seen a case in which there was death of the pulp of a tooth resulting from the operation, any more than we would get death of the pulps of teeth in removing, for instance, the inferior dental nerve from the canal. The pulps of teeth do not die following such an operation, because collateral circulation is established by which the pulps are kept alive.

Dr. Eckley (closing the discussion): I wish to thank the gentlemen both individually and collectively for the interest they have taken in the discussion of this subject. I was particularly interested in what Dr. Talbot had to say regarding the degenerate face and its influence upon the antrum of Highmore. Dr. Ballenger's clay model for demonstrating operations on the antrum and frontal sinus cannot be too highly praised and its teaching value in impressing the correct topography of these parts is unexcelled.

I wish to thank Dr. Arthur Black for referring to the fact that the pulp of the tooth does not die when the dental nerves are interfered with.

Radical Mastoid Operation—Skin Grafting in the Middle Ear and Mastoid Antrum Cells.

William L. Ballenger: About nine years ago this patient, Miss M. G., age 16 years, was

vaccinated. This was followed very soon thereafter by a discharge from the left ear. As far as can be learned, this was the cause of the trouble. Four years ago she came under my observation, was treated by conservative methods for a long time, probably a year and a half, without relief, except temporarily. Three years ago I did a radical mastoid operation, finding cholesteatomatous masses in the middle ear and mastoid cavities, with suppuration, caries, and perforation in the middle fossa of the skull. At the time there was marked meningeal irritation, the patient threatening violence to her mother. The operation afforded relief, but subsequently there was necrosis in the mastoid portion of the wound, which necessitated a secondary operation. A few days following the second operation I did a Thiersch graft in the mastoid portion, and a week or two later I did a Thiersch graft in the middle ear cavity, so that at present the middle ear, as well as the mastoid cavity, is completely lined with healthy skin.

The case is interesting on account of the Fallopian canal being exposed, showing plainly the location of the facial nerve. The Eustachian tube is likewise visible through the mastoid wound. On Monday I passed a bougie through the Eustachian catheter via the nose, and out through the middle ear. There is only left a little suppuration within the Eustachian tube; I expect to close the tube later, and having done it, I shall close the mastoid wound by a plastic operation, and with paraffin injections hope to avoid much deformity. The patient is entirely well, and has been since last October.

Joint meeting of the Chicago Medical and Chicago Orthopedic Societies. March 30, 1904, with the President of the Chicago Orthopedic Society, Dr. Arthur B. Hosmer, in the chair.

Multiple Lipomata.

Dr. Weller VanHook exhibited a man about sixty years of age with multiple symmetrical lipomata. The masses at the back of the neck being especially prominent. The patient first noticed the latter nine years ago. At first the size of peas, they annoyed him an account of the pressure upon his collar button, but within a year or so they had attained their present size, necessitating the wearing of a No. 21 collar.

Dr. VanHook stated that symmetrical lipomata of the neck region were not very rare but that this was a pronounced case.

Gunshot Wound of the Elbow Joint.

The next case presented by Dr. VanHook was one of considerable interest, the patient having sustained a gunshot wound in the month of November, the bullet lodging in the elbow under the olecranon process. On this account the patient was unable to fully extend the elbow. The X-Ray plates were probably the most interesting feature of the exhibit. He made an incision about three inches long and extracted the bullet without much difficulty. There is still some incompleteness of extension but it is gradually improving. The patient is able to swing a sledge-hammer.

Double Congenital Dislocation of the Heads of the Radii.

Dr. VanHook showed a little girl with double congenital dislocation of the heads of the radii, saying that such cases were quite uncommon but not rare. Hoffa has had one of his assistants collect 31 cases from the literature. Of 12 cases that came under the observation of Hoffa, eight were backward dislocations and 4 forward. In the speaker's case, the dislocations were both forward. The arms were in complete extension; no flexion could be effected. But after resection of the heads of the radii, it was possible to get some flexion. There was elongation of the radii, which was common in such cases, preventing flexion at the elbows. The joints were imperfectly developed. The synovial cavities were not sufficiently extensive, and it has been the effort of months of treatment which he has given the case to extend the range of motion in the joints by occasional manipulation with and without nitrous oxide gas anaesthesia. He believed the joint capsules were doing better work now than they did. There was certainly more motion than there was soon after the operations were undertaken. The little patient was now able to put her hand up to her face which she could not do before treatment was instituted.

The first operation for the relief of this deformity was performed by Langenbeck in the earlier part of the last century, when a resection of the entire elbow joint was done. He said that the head of the radius had been resected by Hoffa, Bessel-Hagen and others with reported good results. Resection of the head of the radius was indicated in those cases where there was well-marked elongation of the radius, the radius being thus shortened sufficiently to come into fairly good articulation with the other structures.

The etiology of this deformity had elicited considerable discussion. Some had regarded it as due to an intrauterine improper position, while others had considered it to be due to unequal and improper growth of the bones composing the elbow joint, the elongation of the radius being supposed to be the chief etiological factor. The muscles in his case had never sufficiently developed about the elbow joint, either above or below; but considerable development had taken place in his case since the treatment was begun last June.

Dr. John Ridlon asked Dr. VanHook to offer some explanation of why the arms did not fully straighten. He said that his explanation of not being able to flex them was perfectly clear, but that he did not mention the reason for their inability to fully straighten.

Dr. VanHook replied that he had kept the little girl's elbows on one occasion for quite a little while in as great flexion as was possible in order that the child might reach her face and head. Some contracture had resulted. However, he was in hopes that he would be able to regain the lost extension.

In reply to a question asked by the President, Dr. VanHook said that the ligamentous structures were imperfectly developed, being

very thin and very much spread out. It was quite easy to cut down upon the head of the bone and excise the semi-cartilaginous mass.

Compound Comminuted Fracture Associated With Dislocation of the Ankle Joint.

Dr. L. L. McArthur showed a patient upon whom he had operated for this fracture and dislocation. He mentioned how the fracture was produced. Black mud was ground into the deeper portions of the joint. The vessels of the foot were intact. After some hesitation, but re-enforced by the statement of the patient that she would rather die than have an amputation performed, he decided to try and preserve the foot. Under anesthesia he opened the joint as if to make a resection of it, exposing the entire articular surface by simply turning the foot outwards on the leg. The fibula was comminuted; the tibia was fractured, and the internal malleolus loosened from the tibia. The broken end of the tibia had dirt ground into the pores of the bone. The end of the tibia was chiseled off and freshened; the black dirt washed out of the joint as thoroughly as possible, and 95 per cent. carbolic acid swabbed over the entire joint surface for thirty seconds, followed by the use of alcohol until all the whitening effect of the carbolic acid had disappeared. The tibial fragments were wired together. The lower fragment, fortunately being adherent to the internal lateral ligament, by simply wiring it to the shaft of the tibia allowed sufficient fixation of the foot to permit doing without a cast. On the three following days the patient was given three successive doses of anti-tetanic serum to guard against the possibility of tetanus developing. It was the author's practice to do this in such cases. At the end of four weeks the patient left the hospital with an excellent result having been obtained. He emphasized the desirability of trying, with the consent and understanding of the patient, to save all limbs in which circulation is good, with the opportunity for a prompt amputation, should it become necessary, afterwards. He said it was absurd to hope much from the anti-tetanic serum after the toxins had become colligated with the nervous tissue of the spinal cord.

Compound Comminuted Intercondylar Fracture.

Dr. McArthur called attention to a case of compound comminuted fracture involving the knee joint, the character of the fracture being oblique intercondylar, with one fragment sticking through the skin. The patient, a sign painter, fell from a scaffolding, striking with great violence, fracturing his knee, and driving a fragment through the integument. The wound was enlarged, the fragments wired together, and a useful joint obtained. A skiagraph showed the fragments nicely united and the wire in situ.

Dr. A. B. Hosmer asked whether Dr. McArthur had seen any toxic effects from the use of 95 per cent carbolic acid in joint injuries, after applying it for thirty or forty seconds, where there was extensive injury of bone.

Dr. McArthur replied that he had not. He thought, however, that this was a particularly appropriate case in which to use it.

Dr. Frederick Cleveland Test inquired if he had seen any closing in of adhesions within the joint itself after the use of carbolic acid.

Dr. McArthur answered that he had not.

The remainder of the program was devoted to a symposium on **Tuberculous Spondylitis.**

Etiology.

Dr. Edwin W. Ryerson discussed this phase of the subject, saying that tubercular spondylitis was applied to a destructive tubercular process attacking the vertebrae. It occurred in the anterior portion, or body, of the vertebra, the part which did the supporting and weight-bearing of the upper half of the individual. It practically never affected the rest of the vertebrae, the pedicles, and laminae, and processes, but the intervertebral discs were often destroyed by the direct extension of the disease. The disease was caused by the local deposit of tubercle bacilli which had been disseminated into the blood current, either from an older focus somewhere else in the patient's body, or from some direct infection of the circulation through the skin or mucous membranes. This latter method was rare, but was supposed by Koenig to have occurred in several cases of joint tuberculosis, where at autopsy no antecedent focus could be found. The usual infection route, however, was undoubtedly through the lymphatic glands, bronchial, mesenteric or cervical, from which the bacilli found their way into the circulation individually or in small embolic masses, and traveled through the blood vessels until arrested by some obscure, determining cause, perhaps a minute hemorrhage due to slight traumatism, or possibly a little defect in the loosely constructed vessel walls, which allowed a mural implantation.

The disease was most prevalent among the ill-nourished children of the poor, living in localities where they were exposed to tubercular infection, in overcrowded and unsanitary dwellings. A large proportion of such children were shown at autopsy to have glandular tuberculosis, even though no clinical manifestations may have existed. Moreover, a clear hereditary predisposition had been demonstrated in from 25 to 70 per cent of the cases of Pott's disease, the statistics of the different authors varying within those limits.

Both sexes were about equally represented, boys being slightly more numerous than girls. Age was a powerful factor, for eighty-five per cent of all cases began in the first decade of life, and fifty per cent between the third and fifth years. No age was exempt, since cases were on record as young as two months, and as old as seventy-seven years. The disease was very common, and formed nearly half of all the various tubercular joint lesions. The portion of the spine most frequently affected was stated by Taylor to be the cervical region, but most other observers considered the junction of the dorsal and lumbar regions to be the most vulnerable. When in the cervical or lumbar vertebrae, the deformity was apt to be smaller and more successfully treated than when in the mid-dorsal regions.

Diagnosis and Prognosis.

Dr. John L. Porter said that in no form of tuberculosis did an early diagnosis mean more to the patient than in tuberculosis of the spine. Until the diagnosis was made, efficient, intelligent treatment could not be instituted. With an early diagnosis, not only was the treatment made more effective, and the prognosis improved, but the patient might often be saved a distressing deformity which added to an already crippled existence a burden of mental suffering and pain. He believed that a diagnosis of spondylitis could and should be made in every case before any deformity had appeared; regardless of the age of the patient, in almost every case sufficient additional evidence might be elicited to enable one to decide with reasonable certainty whether it was tuberculosis or not. Stiffness and rigidity of the spinal muscles, limiting the normal freedom of motion, and producing involuntary spasm of the muscles when motion was attempted, were the earliest, the most constant, and the most reliable signs of joint trouble anywhere.

He considered the signs and symptoms of spondylitis in detail, with relation to the different divisions of the spine. He believed more failures to diagnose spondylitis were due to lack of careful examination than to lack of knowledge; but he did know that diagnoses of colic, rheumatism, sciatica, or injury covered a multitude of errors. When practitioners remembered that spondylitis might cause any kind of pain, from headache, earache, to sciatica, and when they cultivated the habit of examining the spine for rigidity as carefully as they examined suspicious lungs for tubercle bacilli, the early diagnosis of tuberculous spondylitis would be more frequently made.

In the prognosis of tuberculous spondylitis, one had to consider: (1) The factors concerned in the prognosis were the time at which the diagnosis is made and the treatment begun. (2) Individual resistance to the disease. (3) The patient's age. (4) The patient's environment. These, with the location of the disease in the spine, were the chief points in determining the prognosis. Each point was elaborated by the speaker.

Straightening of the Curvatures of Tubercular Spondylitis.

Dr. John Ridlon, after mentioning the methods of straightening of curvatures in cases of tuberculous spondylitis, related his personal opinions and conclusions, to which he had arrived from his experience, which were:

So long as the carious disease was active, and before structural shortening in the muscles and distortion in the ribs had taken place, and before any solidification had occurred at the point of disease, straightening of the spinal deformity was possible by gentle means, i. e., without anesthetizing the patient. When the deformity was still increasing, even if some solidification had taken place, straightening could be made by force in certain regions, namely, where distorted ribs and structurally shortened muscles did not hinder, and in all regions some gain could be had by the use of

reasonable force. But when solidification had become complete, or so complete that there had been no increase of deformity for some months, the use of unreasonable force to make the spine straight was to be deprecated. In the cervical region he had always feared to use force to effect straightening. On the other hand, he had never failed to straighten cervical deformity by gentle means, namely, traction during recumbency, in all cases presenting evidence of active disease. In the upper dorsal region it was very difficult to apply force advantageously, and equally difficult to maintain any correction that might be made; and he was of the opinion that gentle traction and prolonged recumbency with leverage would accomplish as much as force. Only occasionally did one effect a straightening in this region; generally one must be satisfied to prevent a development or an increase of the deformity. In the lower dorsal and dorso-lumbar regions, the most frequent site of spinal caries, forcible straightening was most readily effected, and gave the best results. In the lower lumbar and lumbo-sacral regions, it was difficult to maintain any correction accomplished by forcible methods, and it was perhaps as well to treat these cases by traction and leverage. In selecting cases for forcible straightening, one should reject cervical cases as dangerous, upper dorsal cases as too difficult to straighten, and lower lumbar cases as too difficult to hold. Cases where the deformity had not increased for six months or more should be rejected as cases in which the disease had healed; and cases of short duration and no great deformity should be rejected as exposing the patient to unnecessary risk, for these cases could be straightened equally well by gentle methods. Patients that had been subjected to forcible straightening must be kept in absolute recumbency for from eight months to one year at least, and the region straightened must be as carefully immobilized as if fractured. Relapse of deformity to some extent usually occurred, but it was due to ineffective immobilization, careless nursing, or too short a period of recumbency. By gentle methods real straightening was not to be expected in patients who were allowed to sit up and walk around, though sometimes a false straightening could be accomplished; that is to say, the patient as a whole could be made to look straighter, though the actual kyphosis remained the same.

The antero-posterior leverage spine brace was effective as a straightening device only in the hands of one familiar with its mechanical possibilities; it was not to be recommended to the general practitioner of medicine or surgery. Combined traction or leverage, though the most effective gentle means, was useless unless the patient was tractable and the nurse efficient. It should never be tried on an unruly patient, or where the nursing was inefficient.

For most patients, cared for by the average nurse, and treated by any doctor other than an expert, a plaster jacket put on with the patient on Goldthwaite's frame, or some modification thereof, with the jacket sufficiently long both at the top and bottom would be found the most

trustworthy device for immobilization, and when combined with recumbency for a long period, the most satisfactory method of treatment.

The Present Status of the Mechanical Treatment of Spondylitis.

Dr. Wallace Blanchard said that in considering the mechanical treatment of spondylitis it must be thoroughly understood that to get good ultimate results treatment should be begun at the earliest possible moment, and must be persisted in unremittingly until a cure is effected.

It is surprising to meet with a diversity of opinions regarding the utility of the various forms of apparatus, for several surgeons may be equally successful in their ultimate results, each utilizing the appliances with which he is the most skilled. The form of apparatus or method of treatment is of minor importance as compared to a correct understanding of the principles involved, and a firm determination when a case was once undertaken to unremittingly persevere as long as treatment might be necessary.

Treatment by recumbency was frequently advisable in the early acute stages, and was occasionally necessary in cases that had become considerably advanced without any adequate treatment and with considerable deformity, with general physical weakness, and more or less advanced Pott's paraplegia. When recumbent treatment was employed it should be faithfully carried out with the view of having the patient on his feet with his spine safely protected in a jacket or brace at an early period. Frequently when the deformity was advancing, the most approved treatment was a combination of plaster jacket or brace with recumbency on any convenient lounging place, and preferably in the open air. The plaster jacket was very largely used and its efficiency had been greatly increased, if not doubled, by the use of the Goldthwaite stretcher frame. The author demonstrated how to apply the plaster jacket by the aid of this frame, and stated that prolonged experience had thoroughly demonstrated that when made and applied with proper skill and care, the plaster jacket and many of the forms of braces were very efficient for the treatment and cure of spondylitis, and that in a great majority of the carefully treated cases the deforming hump could be minimized and largely neutralized, and in a few favorable cases nearly, or quite, obliterated.

A set of principles based upon the most approved mechanical means of treatment might be formulated, though the extent to which they could be carried out varied in each individual case. (1) To remove the superincumbent weight of the body. (2) To prevent flexion and rotation of the spine. (3) To put the greatest possible amount of pressure upon, or in the immediate vicinity of, the deformity compatible with the integrity of the skin. (4) To very thoroughly hyperextend the spine.

It was believed that the application of these principles placed the spine in the best possible circumstances for healing, with the least possible amount of deformity.

The author exhibited a plaster jacket with chin rest; a Taylor back brace with head sup-

ports; a brace for cervical spondylitis partially applied, with the chin nearly touching the chest, which was the typical position in advanced cervical spondylitis, and a brace for the treatment of cervical spondylitis.

Gravitation Abscess.

Dr. Alex. C. Wiener discussed this phase of the subject, and presented a patient upon whom he had operated for gravitation abscess. Gravitation abscess was both frequent and difficult to treat. There was a temptation to open these abscesses at the most prominent part and empty the pus, but this did not reach the seat of the difficulty. It only encumbered the patient with permanently oozing fistulae, which were usually accompanied by mixed infection and amyloid degeneration, followed by the death of the patient. Such abscesses were rarely accompanied by fever, 101° F. being the highest recorded. The ordinary symptoms of sepsis were not present, and under favorable circumstances absorption might take place. He had observed in the right iliac fossa in a man, 45 years of age, a tuberculous abscess the size of a child's head, which disappeared without leaving a trace. In this case there was a destruction of the first lumbar vertebra, and the only treatment employed was a permanent extension apparatus.

Recently he had used, in a large psoas abscess, reaching down to the middle of the left femur, which originated in a tuberculous spondylitis of the first and second lumbar vertebrae, a large trocar to empty the pus. The man, 34 years of age, was attacked seventeen years ago with tuberculous spondylitis, which left quite a kyphosis of the lumbar spine. For seventeen years he did not experience any inconvenience, when, without apparent cause, the tuberculous process revived, resulting in a large psoas abscess which bulged forward at Scarpa's triangle. Just behind and below the left great trochanter was found a small swelling the size of a silver dollar. This spot was chosen for three preliminary injections of carbolic acid, six drops each time, five and seven days apart. Carbolic acid seemed to have powerful chemotactic qualities, since it allured, so to speak, the pus to the outer side of the femur. One pint of thick pus intermixed with chunks of fibrinous coagula and fine osseous debris was emptied the first time. Then fifteen drops of ninety-five per cent solution of carbolic acid were slowly injected into the abscess cavity. The operation was repeated six times at intervals of one to three weeks. The last injection was made three months after the first one, when the fluid had changed into a clear yellow serum. At no time was there any harm experienced, either local or systemic, and the injections seemed to cause no pain or inconvenience.

Surgical Treatment of Tubercular Spondylitis.

Dr. A. E. Halstead said that the surgical treatment of Pott's disease comprehended (1) the removal of the tubercular focus in the bone; (2) the treatment by incision or by puncture of the abscesses that are secondary to the bone disease, and (3) the operative treatment by laminectomy of the most serious of all of the complications of this disease, namely, the para-

plegia resulting from pressure upon the spinal cord. The treatment of these abscesses by incision did not yield good results because of the inaccessibility of the underlying bone disease. In the cases where there was no hope of following the abscess to its source in the bone, incision should, if possible, be avoided. In this class of cases aspiration of the contents of the abscess cavity, followed by washing out of the cavity and the subsequent injection of iodoform, should be practiced. In cases of small abscess, one should incise the abscess and eradicate the diseased tissue, as this offered the best hope for a speedy and permanent cure. When the abscess was large, or when it appeared some distance from the diseased vertebrae, as in psoas abscess, puncture and injection of iodoform emulsion should be practiced to prevent rupture and consequent mixed infection.

He said the post-mortem findings in cases dying from paralysis occurring in Pott's disease presented the strongest argument in favor of laminectomy. It had been fully demonstrated that the paralysis was practically never due to an inflammation of the cord, and that the so-called myelitis was not a myelitis, but a pressure atrophy of slow development. Schmaus and others had shown by a careful study of the post-mortem records that it was only in about two per cent of the cases that the pressure exerted upon the cord was the result of angularity of the vertebral column. In thirty-two cases out of thirty-three reviewed by Schmaus, the pressure was due to the tuberculous process breaking into the spinal cord, the immediate cause being either a tuberculous peripachymeningitis or a tuberculous abscess within the canal.

The author's experience in the operative treatment of paraplegia due to spinal caries had been limited to two cases, which were detailed, one of which recovered, and the other died.

He said laminectomy was contraindicated in cases in which there was tuberculosis of any other organ. In one of his cases the lung and pleural tuberculosis probably existed before the operation, although its presence was not recognized. The duration of the paralysis offered no contraindication to the operation, as it was not so much the length of time that the cord had been subjected to pressure, as the way in which the pressure was exerted that affected the integrity of the cord and determined the possibility of recovery.

Discussion.

Dr. M. L. Harris said that the importance of an early diagnosis had been very well emphasized, and the statement also made, which was eminently correct, that mistakes in diagnosis were usually made because of omission on part of the surgeon or the physician to recognize certain points which were well known. These were errors of omission.

The rigidity which had been emphasized as the early symptom was present in such a number of conditions about the cervical region that more attention should be devoted to this region in the differential diagnosis than to rigidity in other regions of the body. That is to say, there were so many conditions which might occur

about the head and the neck which would produce rigidity of the cervical spine that one must make a differentiation. One of the important points to be observed in rigidity of the cervical spine as indicating the involvement of the spinal column itself was the relief which came from extension. For instance, take a child with a rigid neck, by gently extending the head and relieving the pressure, consequently pain, considerable motion might be given to the head without resistance on part of the patient. If one found relief of rigidity by this extension, it was certain evidence that the trouble was in the spinal column itself. If the rigidity was due to any extra-spinal trouble, it was almost always increased by extension and by motion.

With regard to the treatment of abscesses, as long as a tubercular abscess of spinal origin was not increasing in size, he thought it should be left alone, as many of these abscesses disappeared by proper mechanical treatment. Only when they increased in size, in spite of conservative treatment, and when they were approaching the surface and seemed as though they would rupture spontaneously, something should be done by the surgeon. One should always attempt to cure these abscesses by the so-called subcutaneous method first, that is, aspirating them, and after washing them out, injecting them rather than opening them, in order to avoid secondary and mixed infections. In emptying these abscesses by means of a trocar, for instance, great care should be exercised not to produce unnecessary pressure on the abscess, as by so doing one was liable, particularly if the trocar became occluded by the caseous masses, to infect the tract around the trocar, and one would have spontaneous opening of the tuberculous tract soon after in spite of anything he could do. The trocar should be introduced from some distance, to prevent if possible, the escape of any of the fluid about the trocar, or following the trocar after it had been in the joint. He had seen infection follow the track of the trocar in a number of cases. He had used carbolic acid for a long time in injecting these cavities; it was preferable, as a rule, to iodoform emulsion.

Dr. Frederick Mueller said that early diagnosis in every case of Pott's disease was of the greatest importance, and although we did not have any means of stopping the tubercular process proper, we might succeed sometimes in restricting the deformity which would always follow the establishment of a tuberculous process in the vertebral column.

The treatment which had been advocated was mostly conservative, which supported or extended the vertebral column, thus confining all surgical intervention to the treatment of abscesses and paralysis.

Different kinds of appliances and apparatus had been mentioned. They were all useful in treating these cases, and no doubt good results could be obtained by employing them, but he did not think it was possible to give preference to a special brace in all cases. He said the Lorenz apparatus was very effective in these cases. It had more advantages than the Bradford frame, because in the Bradford frame the

patients were able to make lateral motion, whereas in the Lorenz plaster bag or apparatus the patient was kept always in the same position. This apparatus consisted of a posterior case of plaster-of-Paris which included the head, neck, back, and pelvis, and was well padded. Dr. Mueller then discussed the pathology of the paralysis in cases of spondylitis, and said that Schmaus of Munich, about ten years ago found that paralysis in cases of Pott's disease was due to a kind of inflammatory edema, which was caused by the establishment of the tubercular process in the surrounding membranes of the medulla. This edema might last for years, or it might either disappear or terminate in a real myelitis. If the latter occurred, then the patient had permanent paralysis, whereas in the first instance the motility returned and the patient recovered.

He referred to the treatment of Pott's disease as advocated by Calot about eight years ago.

As to the treatment of paralysis, he mentioned laminectomy, saying that most of the surgeons who had operated on cases of paralysis by laminectomy had said that the paralysis disappeared independently of the operation that had been performed. He had seen two cases of paralysis in Pott's disease treated by the Calot redressment, and he was convinced that this treatment was very effective for paralysis. At all events, it saved patients from surgical intervention which might be fraught with great inconvenience and serious results.

Dr. Ridlon said, in referring to the remarks of Dr. Harris, that an abscess should not be interfered with unless it made the patient sick, no matter whether it was three inches, or one-eighth of an inch, from the surface. If, however, it made the patient sick, it should be removed.

The symposium was further discussed by Drs. Wallace Blanchard, Frederick Mueller, Alexander C. Wiener, Edwin W. Ryerson, L. L. McArthur and John L. Porter.

A clinical meeting was held April 6, 1904, with the President, Dr. R. B. Preble, in the chair.

Aneurysm of the Aorta.

Dr. Frank Billings: This patient is 45 years of age; resides in the city; bricklayer by occupation, and was born in the United States. He was admitted to the Presbyterian Hospital on the 29th of January, at which time he gave the following history: His father died at the age of seventy from some unknown cause; mother died at the age of forty following childbirth. Two brothers and one sister are living and well; no brothers or sisters dead. There is no family history of tuberculosis, of malignant disease, or of heart disease. The patient is the father of five healthy children, the oldest thirteen, and the youngest four. He has had the diseases of childhood. When nine years of age he had an attack of what he called "typhoid pneumonia" which confined him to bed for a period of three months. He made a complete recovery from this. When eighteen years of age he had an attack of specific urethritis which lasted for two or three weeks, after which he was well. He

denies any other venereal infection. Previous to the beginning of his illness he worked at his trade steadily for twenty-seven years. While his work has been heavy most of the time, he has never had to use any violent exertion at any time. He uses alcohol in the form of beer and whiskey in moderate amounts; he drinks on an average not more than one drink a day; he has drunk none during the last ten months. He smokes a pipe moderately; uses tea and coffee in moderate amount. He has lost thirty-five pounds in weight within the past year.

Six years ago the patient first felt a sharp pain in the region of the right shoulder which came on suddenly while he was at work. He describes this pain as severe, beginning in the anterior portion of the chest, about an inch to the right of the right nipple, and passing directly backward through the shoulder, and from the shoulder blade extending downward along the side of the chest, and sometimes across to the opposite shoulder. Pain was not increased at that time by motion of the shoulder joint. At first, the pain would last for a period of from one day to a week at a time, and then it would disappear for a month, but gradually increasing in severity and frequency of recurrence until fifteen months ago, since which time it has been continuous and patient has been incapacitated for work. About a month ago, after patient stopped work, he noticed that his voice was falling, and thought this was due to having taken cold. At about the same time dyspnea came on, which was worse on exertion. This pain at the present time is continuous; it is of a dull, aching character, and is made worse if the patient should take cold or if he occupies a cold room, or if he walks or stands for a long time. It is relieved by sitting down or by leaning forward. It is always worse in cold weather. His appetite during this time has been fairly good; bowels usually constipated.

Physical examination at the time the patient was admitted to the hospital was practically the same as it is now, except that the symptoms and signs are a little more marked now than they were then. I will not read what was said at that time, but enumerate symptoms as I go on, excepting this: His pulse has been rapid since admission. The first night it was 100 to 108. Now his pulse ranges from 80 to 100. His temperature has been slightly elevated, sometimes subnormal. It has reached 99°, but has never been a febrile temperature. The urine on admission was concentrated, the specimen having a specific gravity of 1038, with a faint trace of albumin, but no casts were found. There were many leucocytes found in the specimen. A twenty-four hour collection made soon after his admission gave only 520 c.c., with a specific gravity of 1035, a faint trace of albumin, but no sugar, no casts, many squamous epithelia; a large number of leucocytes, but no red cells; urea, 3.4 per cent, 17.6 grams in twenty-four hours, and 42 grams of total solids. Blood count on admission showed 5,800,000 reds, hemoglobin 80 per cent and 9,440 whites. His blood showed 125 milligrams pressure; another blood pressure taken three days later showed 115 mil-

ligrams. A sphygmogram shows the difference in the pulse tracings, the left pulse tracing being much less in amplitude than the right. A tracheal tug is present.

As I have said, physical examination made at the time of his admission was practically the same as that of today. There is not much to be seen excepting perhaps the left side of the chest is a little more elevated than the right in the mammary region. The internal mammary vein is not enlarged in any of its branches. The radial pulses differ; one can easily get a difference with the patient in any posture, sitting, lying or standing, and the left is much smaller than the right, and the waves not as distinctly felt. The apex beat of the heart cannot be seen or felt. I have outlined the area of percussion dullness, which extends pretty near to the middle of the clavicle on the left side. On the right side dullness begins at the sternal junction with the clavicle, and is easily ascertained, so that we have it extending down to the sternum in the direction I show you, and across in this way (indicating). It marked about the area I have shown you when he was admitted, but now the area of dullness extends fully one inch to the left of the line when he was admitted. On listening over this area there is nothing to be heard excepting a fast heart beat, with the long interval of the heart beat diminished. There are no murmurs to be heard; no thrill to be felt. Associated with the history is the change in the patient's voice which he noticed himself, and on laryngoscopic examination it has been found that the left vocal cord is paralyzed and motionless due of course to paralysis of the left recurrent laryngeal nerve.

Let us review briefly the symptoms in this case. First of all, pain, which was intermittent at first, and perhaps had something to do with his work, being aggravated by cold, standing, or walking, but gradually becoming in time continuous and decidedly aggravated by physical effort and associated later with shortness of breath. The pain runs only to the shoulders, and associated with it we have paralysis of the left vocal cord.

I will now show you some skiagraphs of this case, one of which is taken from the front, showing a shadow to the left, almost in the line of the apex. Another was taken from the back which throws a shadow on the opposite side. In this skiagraph, which was taken with the patient lying on his back, you can readily see a shadow, beginning at the clavicle, and recognize the fact that dullness would begin at the clavicle on the left. On the right side, it begins at the sterno-clavicular junction, and runs almost vertically along the sternum. On the left side there are seemingly little nodules or excrescences upon the sac itself. It has been suggested by Dr. Smith who took these skiagraphs that there is possibly a deposit of calcium salts at these points. It can hardly represent anything more than an irregularity in the wall of the sac.

This is a plain case of aneurysm of the transverse arch one which requires no differentiation from, for instance, mediastinal tumor.

Patient has improved since he has been in the hospital, because of the rest and diet he

has had. He is allowed to have all that his appetite craves. He is not allowed to take much fluid white eating, but drinks a good deal of water between meals. His bowels have been kept open. He has been placed on ten grain doses of iodide of potassium. Chloride of calcium was later added to the iodide of potassium, hoping that it would increase the coagulability of the blood, and thus give an opportunity for improvement by the formation of a clot in the sac.

Dr. Robert H. Babcock: This man is 53 years of age, Irish, a laborer by occupation, and has been an inmate of the Cook County Hospital for the past seventeen months. He gives a rather meagre history prior to his present illness. The family history is negative. As to personal history, he admits having had gonorrhea at the age of nineteen. He denies syphilis, and gives a history of no other important disease. He states that his present trouble began a little over two years ago with weakness and inability to work, associated with difficulty in breathing and pain. On inquiring more carefully into the nature of the symptoms, it was found that the dyspnea and pain were present only during exertion, and ceased with the cessation of effort. Pain was felt in the lateral aspect of both halves of the chest, and is described as having been a drawing together of the chest. He was admitted, after having suffered more or less for a year, to the Presbyterian Hospital, October, 1902, and was very ill with symptoms evidently due to stasis. He got better, left the hospital, and was admitted to ward 8 of the Cook County Hospital the early part of December, 1902, and has remained there until the present time. His condition on entering the hospital was very grave. He was edematous, and suffered from attacks of dyspnea which were evidently paroxysmal in nature, coming on with considerable frequency, recurring at short intervals, and lasting in some instances as long as two or three hours. He describes these as attacks of suffocation, which seemed to start in the lower zone of the thorax and extend up to the throat, and during which attacks he felt as if he would suffocate. A description of these attacks suggests that they were due probably to irritation of the recurrent laryngeal nerve, and were of the nature first described by Dieulafoy, and of which illustrative cases have been reported by our President, Dr. Preble. In time these attacks of dyspnea subsided and gave way to more persistent shortness of breath which, however, now are not very urgent except on exertion. That suggests to my mind that in time the pressure upon the recurrent laryngeal nerve produced paralysis. In February, a year ago, patient had a febrile illness, with symptoms of bronchitis of rather short duration. In April, a year ago, he was again very ill with symptoms of great pressure and suffered very much from dyspnea and insomnia, but after three or four weeks got better and at the present time he is tolerably comfortable.

His present symptoms are chiefly those of dyspnea of effort, etc. He no longer suffers from pain. Within the last two months or

thereabouts he has noticed a change in his voice. It is husky, and as you observe, his cough has taken on a peculiar character. (Patient coughed.) It is a loud, rather brassy cough at times, although when I saw him last week his cough was quite toneless on that day. His gastro-intestinal tract is not disturbed. He sleeps well; he has no elevation of temperature.

When we come to inspection of the chest there are some things that are quite noticeable. The first thing is some distention of the venules and veins on the upper portion of the left thorax, but not on the right side. Close inspection also shows prominence in the region of the right clavicle, and when looked at, especially from behind and downward, the clavicle seems to be lifted upward and forward with each cardiac pulsation; also there is observable a pulsation in the right infraclavicular region. The apex beat is situated downward and to the left, as has been shown by some marks on the skin, about the sixth interspace, and an inch or so outside the nipple line. There is some epigastric pulsation, but I do not know whether it is visible. Close inspection of the face does not show cyanosis or evidence of much pressure except in the eyes. The pupils were described to me this morning as noticeably small and reacting very feebly to light. This suggests pressure upon the cervical sympathetic, and partial paralysis of the sympathetic fibers distributed to the iris. Palpation confirms the results of inspection. One can appreciate with the hand this lifting of the right clavicle, and can also appreciate the strong pulsation in the neck which is visible above the clavicle, and can appreciate that that pulsation is separated from the clavicle by an interval in which one cannot feel any pulsation. This pulsating vessel is therefore the subclavian displaced upward. The apex beat is palpable, is rather feeble. There is no thrill. Epigastric pulsation is very plainly perceptible, and the liver is palpable down to a distance of three fingers below the costal arch. Bimanual palpation detects a feeble pulsation in the aortic area below the right clavicle. Palpation of the radial arteries is interesting, since it shows that in this case there is an inequality in the pulses. The pulse in the left wrist is much smaller and feebler than the right. Want of uniformity in the two pulses of the wrist does not of itself signify necessarily aortic aneurysm, for there may be local causes for it. If the vessels away up the arm and in the neck are found correspondingly altered, then it becomes a strong corroborative symptom taken in connection with others. In this case it is found that not only is the left radial small and weak, but so also are brachial, axillary and subclavian. It is further noted that the pulse of the right wrist, which is of fair volume, is slightly collapsing, and a capillary pulse can be seen and felt in the fingers. The veins of the arm, as you see, are rather turgid. I note also the condition of the arterial coats. They are very stiff, a little bit nodular and tortuous, as is the condition in all of the arteries of the upper extremities. The percussion areas of dullness were detected and outlined this morning. The one up above here (indicating) starting to the

left of the sternum descends obliquely, crosses the sternum and runs up here to the right, and that is separated by an area of comparative resonance from the area of dullness which starts at the right sternal border, as nearly as I can determine, passes out to the left outside the nipple, and down. The upper border of the heart is at the upper border of the fourth rib. It is abnormally low, and suggests that the heart is pushed downward and to the left, as we know is so often the case in aneurysms of the arch of the aorta. The position and shape of the heart indicate a dislocation to the left, but the left border of the heart runs so far outward as to suggest some hypertrophy of the left ventricle. Hypertrophy of the heart is not caused, as is popularly supposed, by aneurysm *per se*. There must be some other factor produced by the aneurysm which in itself is capable of producing hypertrophy. And in this case there is an insufficiency of the aortic valve which is capable of producing hypertrophy and dilatation of the left ventricle, and that probably explains the great size of the heart to the left. The cause of this aortic insufficiency is probably to be found in pressure. I might say in passing that there are two modes of its production in these cases. It is extremely common in cases of aneurysm of the arch of the aorta, and in some cases it is probably due to an actual stretching of the aortic ring. In other cases there is pressure made by the sac upon the basal portion of the heart at the region of the aortic opening in such a way as to cause a muscular insufficiency of the aortic valves. Which of the two is present here is not easy to say.

I should add that percussion of the lungs is practically negative, except that possibly there is a slight diminution of resonance over the left half, especially over the lower portion of it. Breath sounds over the left lung are diminished somewhat, as compared with those on the right side. On auscultation, starting at the apex beat, one hears muffled heart sounds. They are feeble, and the first is accompanied by a feeble murmur. Passing upward to the aortic area one finds in the third interspace to the right heart sounds are heard plainly. The first sound is somewhat muffled and obscured by a murmur. The second is ringing and is also accompanied by a faint murmur. The sounds are transmitted abnormally far outward and downward, being heard with great distinctness internal to the right nipple. At the left the pulmonary sound is accentuated. Over this area of dullness, which represents the situation of the sac, there is no distinct bruit heard, a feeble bruit perhaps. In the neck on the right side there is one distinct arterial tone, whereas on the left side there are two. One can detect a specifically interesting phenomenon when he auscultates in the mouth. When the patient holds the bell of the stethoscope between his teeth and stops breathing for a moment, two murmurs of great harshness are plainly audible, and are the audible expression of the same murmurs which one hears more feebly down in the chest.

With reference to the examination of the

larynx, an attempt was made by my interne to make an examination of the larynx the other day, but he found it impossible to get a good view, due largely to the fact that the patient's throat was unusually sensitive, even though it had been cocaineized, and also the epiglottis could only be lifted to an angle of about thirty degrees, so that he was unable to satisfactorily inspect the interior of the larynx.

This is plainly a case of aneurysm of the aortic arch, and cannot be mistaken for anything else, on account of the clearness and definiteness of the signs and symptoms.

The chief question of interest is, What is the location of this aneurysm? It seems to me the aneurysm is unquestionably one of the transverse arch. This is borne out by the character of the symptoms, especially the fact that there is dyspnea rather than pain, and that there are evidences of pressure upon the recurrent laryngeal nerve. I might mention here what I forgot to say in my previous remarks, namely, that tracheal tug is faintly present. When the neck is strongly distended, one can detect a distinct, though not pronounced, downward pull of the trachea, corroborative evidence merely of aneurysm of the transverse arch, but not by any means a pathognomonic sign, as was once supposed.

This case is interesting from several standpoints. There is no history of syphilis, but there is a history of hard labor and of the immoderate use of alcohol in earlier life, and perhaps the etiology of the case is to be found in the degenerative changes in the coats of the aorta produced by these two factors, although many pathologists deny that aneurysm can be produced by sclerosis merely, unless it be of syphilitic origin. The case is interesting, too, from the fact that there are no distinctive signs of pressure effects upon the circulation. There is no great distention of superficial veins, as in many cases, and what little disturbance of circulation there is in the liver and in the internal veins might very well be ascribed to the changes which have been produced in the heart. Probably pressure of the sac itself exerts a considerable influence in the production of stasis, although there are no marked evidences of pressure upon either vena cava. The case is likewise interesting from the fact that the prolonged rest in the hospital, patient being in bed for considerable periods of time, and has not been subjected to conditions that would aggravate the disease, has caused not a marked or rapid progress in the growth of the sac. In fact, the record of findings, when the patient entered the hospital, was very largely that of today. The great difference is found now in the changes which have taken place in the voice and some evidences of greater internal pressure. The case can be classified as one in which the aneurysm produces both subjective and objective signs.

The treatment has been the ordinary routine treatment of symptoms—rest in bed, rather light diet, iodide of potassium, and then treatment symptomatically as occasion requires.

Dr. C. A. Elliott: This man is fifty-four years of age. He belongs to a family of me-

chanics. His father and mother both died at advanced ages. He has had six brothers and sisters, two of whom are dead, one of Pneumonia, and one by an accident. All of the others are living and well. His wife died five years ago of insanity following an operation for ovarian tumor. He has one child, twenty-one years of age, healthy and a professional athlete by occupation. There is no history of aneurysm, syphilis, tuberculosis, or malignant tumor in the family. He was born in Kentucky in 1850, and has lived in Chicago off and on ever since 1870. As a young man he was employed as a machinist and blacksmith. For seventeen years, until the beginning of the present trouble, he has been a professional athlete. For two years he was a trapeze performer and tumbler in a traveling circus, otherwise employed as a pugilist and trainer. At one time he kept a school of physical training. His habits are good; he drinks occasionally and smokes daily, but not to excess. His digestion and appetite are good. His bowels are regular. He has lost ten pounds since the onset of the present trouble although he states that he has been gaining in weight of late.

As to previous illnesses, he had gonorrhea at the age of twenty-four, otherwise has never been seriously sick. At thirty-seven after a pugilistic contest, in Salt Lake City, he vomited a half pint of blood. He denies ever having had syphilis.

The present illness is of four and a half years' duration. A diagnosis of aneurysm was first made two years ago. The first symptom he complained of was shortness of breath. This has been present from the start, and is the most important feature of the case to him. Pain has been present much of the time:

First. Felt in the right lower chest wall which he describes as being similar to that experienced by the ends of a broken rib being rubbed together. This was present for about a year, but it has not been present now for two years.

Second. Painful sensation as if the chest were squeezed in a vise, the scapulae being ground together. This was present for two years, but has been absent for the last six months.

Third. Shooting pains in his left arm, prominent two years ago, and occasionally felt at the present time.

Fourth. Pain in the lumbar region on the right side which is constant at the present time.

He has had some difficulty in talking, but this was more prominent six months ago than it is now. At one time he had a peculiar choking sensation which he experienced upon swallowing, but that has not been present for six months, and there has not been any obstruction to the passage of food, nor pain on swallowing at any time. A tumor was noticed two and a half years ago. He stated that it was considerably larger eighteen months ago than it is at the present time, but that for the last six months the tumor has been growing larger. A

whizzing noise is heard by the patient at times in the chest. He has no cough.

He has been in a number of hospitals, and during a stay of three months in one of them, a year and a half ago he received two gelatine injections. The first one was in the back between the scapulae. He stated that six ounces of a mixture of which he does not know the percentage was used, and this was followed by local pain, but no serious after-effects. A second injection was given in the right leg in the popliteal space, the amount being six ounces. This was followed immediately by pain, swelling, and the leg became infected. It was four weeks before he recovered from this infection, and at one time it was thought that it might become necessary to amputate the leg. Upon leaving the hospital at that time he was in bad shape, but has been gaining strength for the last year and a half, and the pain from which he suffered at that time has almost entirely disappeared. He has taken large doses of iodide of potassium and nitroglycerin over long periods of time.

Upon examination a pulsating tumor may be seen in the left chest wall. This is ten centimeters in diameter and extends from the second to the fourth rib just to the left of the sternum. The apex beat is to be seen in the sixth interspace, about an inch to the left of the mammary line. A generalized arteriosclerosis is present, with pulsations of all of the superficial arteries. There is a capillary pulse that can be seen and felt. The pulses at the wrists show characteristic water hammer pulsation and a marked difference in the two sides; on the left, the pulsation is not as prominent as it is on the right and is slightly delayed as shown by sphygmographic tracings taken simultaneously. It is almost impossible to detect it, yet with the instrument it is possible to demonstrate a slight delay in the left pulse.

Upon percussion the heart shows an inverted pear shaped area of dullness, fifteen centimeters in diameter at the level of the third rib, extending three centimeters to the right of the sternum and comes to a point at the apex in the sixth interspace one inch to the left of the mammary line. The fluoroscope shows a definite boundary of the right side of the heart three centimeters to the right of the sternal border, but the area over the tumor does not show so well in outline on account of the constant pulsations of the aneurysm.

Upon auscultation at the apex there is heard a harsh, roaring systolic murmur, and a soft diastolic murmur. Over the aortic interspace there is a double to and fro murmur, both systolic and diastolic. Over the tumor, two murmurs may be heard, systolic and diastolic. Over the posterior aspect of the chest at the level of the eighth rib on the left side can be heard two distinct murmurs, systolic and diastolic. Upon auscultation over the lower parts of the chest many rales may be heard, and at the left side of the heart occasionally a squeaking rub is to be heard. A tracheal tug is easily demonstrated. Skiagrams showing especially the aneurysm and the dilated right heart have been taken and a number of pictures will be

shown. Urinalysis shows a large amount of albumin, with hyaline and granular casts.

To me there are a few interesting points in this case. First. The patient being an athlete, it seems fair to consider stress and strain to which he subjected himself, the etiological factors back of his case. Second. He seems to be much better now and the size of the tumor less than it was two years ago. (Several skiagrams and sphygmographic tracings were passed around).

Dr. Charles L. Mix: The patient whom I have to show this evening is a man, 49 years of age, who came to the Post-Graduate Clinic a week or so ago with the information that he had heart disease, and desired to get a little benefit, if it was possible for us to give him any. He informed me that about three months before he was suddenly seized with an attack of severe pain in the left side, clearly paroxysmal in character. Personally he regarded it as pleurisy. The pain did not extend down into the arm. This attack persisted for a little while disappeared, and then recurred after a time. He has had three paroxysms altogether. In addition to that, he has been troubled with a certain amount of dyspnea.

We did not bother about getting his history, but as soon as he had removed his clothes and I had seen his chest, I asked him if he had ever had specific trouble, and he told me that he had. If you will stand at the patient's side and put your hand against this region (indicating), you will feel a heave. Curiously enough, if you put your hand upon his chest and expect to feel a thump, you do not feel it; the only thing which you do feel is a heaving, which you can also readily see. This shows that the maximum amount of aneurismal disturbance is on the right side of the chest. You know the old rule, the nearer the heart, the more frequent the aneurysm. But curiously enough, the aneurysms which have been shown tonight have been far from the heart. Here is one which evidently lies near it. Furthermore, there is dilatation of the venules which one sees in cases of adhesive pleurisy, in some cases of mediastinal tumor, pericarditis, and sometimes in emphysema. In this instance they are scattered well around the chest.

So far as dullness is concerned, you readily see how dull this area here is (indicating). It is absolutely dull. It is hardly necessary for me to map out the absolute line of dullness. The apex beat is outside of the nipple line suggesting hypertrophy, dislocation, or dilatation, and probably in this case there may be all three present. The hypertrophy, which is secondary to arteriosclerosis, which was a primary affair, is probably of some years' standing. The dilatation may be due to a certain amount of myocardial trouble which is beginning to develop in the heart tissue.

When we feel the radial arteries we find conditions the reverse of those that have been mentioned in the previous cases. In all three preceding cases the left radial was weak, caused by the aneurysm producing either pressure or distortion of the subclavian artery, thereby weakening the radial pulse. In this instance it

is the right pulse and the right carotid which are weak, because the distortion which has taken place in the aorta has involved the opening of the innominate artery, thereby decreasing the strength of pulsation. In other cases shown, although nothing was said about it, I should think that inasmuch as there is in each case a pressure by the aneurysm upon the left bronchus, there must be definite respiratory changes on the left side of the chest. This patient does not show them; on the contrary he shows weakness in breathing on the right side, and this is curious on this account. The ascending portion of the aorta has the pulmonary artery in front of it; behind it lie successively the right auricle, the right pulmonic artery, and the right bronchus; so that it is difficult to see how there can be reduction of breath sounds upon the right side of the chest in aneurism of the ascending aorta. Nevertheless, he seems to show it. In all classical descriptions of aneurism, the reduction of breath sounds is on the left side in all those cases in which the aneurism is situated at the transverse arch or in the descending portion.

This patient shows a certain amount of delay in the radial pulse on the left side, due to the aneurism of the ascending aorta. The tracheal tug is slight. You can barely get it, on account of the fact that the transverse arch is not involved, but rather the ascending portion. If the transverse portion is involved, hooking around the left bronchus as it does, it gives a first-rate tracheal tug.

Aside from what is found on inspection, and percussion, auscultation yields very little and there are no murmurs, and in this respect the case resembles the one shown by Dr. Billings. It is a fact that many aneurisms are not attended with murmurs, and this is one of them. Moreover one does not always hear in aneurisms any diastolic accentuation, many existing without it. In some cases you hear only two dull sounds; in others you hear nothing, such a case resembling mediastinal tumor. The cough is characteristic, and by its qualities alone it might safely be judged that he is suffering from aneurism or from some laryngeal trouble. We have not made an examination of his vocal cords; that could be done, but it would be only a refinement in diagnosis. The cough is not due to pressure upon the left recurrent laryngeal nerve, but is more likely due to possible involvement of the right laryngeal nerve as it passes around the right subclavian artery because in some of these cases aneurism of the ascending aorta produces laryngeal disturbance through the right, and not through the left, recurrent laryngeal nerve.

So far as the possible diagnosis of mediastinal tumor in this case is concerned, I must say, I do not think it holds, in view of the presence of a pulsating tumor. Furthermore if you compare the radial pulses you will note a difference not easily explained by the hypothesis of a mediastinal tumor. Moreover, in this case, there are no particular signs of pressure from mediastinal tumor in the sense of unilateral edema or cyanosis.

There is a certain amount of fulness here

above the clavicle, which possibly can be regarded as due to secondary aneurismal disturbance, which has long since been described. Aneurisms frequently press upon the innominate veins and produce a certain amount of turgidity in the innominates as far back as the valves of the internal jugular and the valves of the subclavian; as is well illustrated in this case. It will be recalled that signs of pressure upon the right bronchus were noted in auscultation of the chest. Very possibly the pressure of the aneurism upon the right auricle explains the abnormal fulness of both innominate veins, and the bulging of the supraclavicular spaces.

Dr. Galloway reported a case of **Aneurysm**. (Report not received.)

Dr. R. B. Preble: I desire to present the X-Ray plate of a patient whom I expected to have here tonight. My sole reason for reporting the case is not that it presents any extraordinary features in the way of aneurysm, but rather because it presents so few.

The patient appeared at the clinic some two weeks ago complaining of dyspnea upon exertion and upon reclining, and in addition to that, upon inquiry, he told us that he had been suffering for weeks in this way, and had some edema. He had edema of the eyelids, which was manifest in the morning, and edema of the feet, which was manifest at night. During the night the edema of the lower extremities disappeared, while the edema of the face appeared, and vice versa, during the day.

Upon physical examination of this patient, a colored man, we found that he was well nourished, but the first thing that impressed one upon inspection was the extreme tortuosity of the brachial vessels, with a high degree of arteriosclerosis, although forty-three years of age. By the way, it strikes one as singular that this is the first colored patient with aneurysm that has been reported this evening, because aneurysms are more common among the colored race than among the whites, so far as my personal experience goes. All of the cases that have been presented tonight have been white.

The man is a hostler by occupation, and denies a syphilitic history.

Upon examination of the thorax one is struck at once by the fact that the heart is considerably enlarged, the apex beat being situated an inch and a half to the left of the nipple line, and in about the seventh interspace. It is strong and quite regular in its action, and not particularly accelerated. On percussion we are impressed with the fact that behind the sternum is an area of distinct dullness. This area continues downward until it fuses with the heart, which, upon percussion, proves to be enlarged considerably toward the left side. There is no evidence of enlargement to the right. Examination of the heart by auscultation shows that its tones are pure and regular, with the exception of the second aortic tone, which is associated with a diastolic murmur of minimal intensity. Examination of the pulse with this murmur in view shows that the man has an indefinite and indistinct capillary pulse, and over the femoral vessels, we have the Duroziez phe-

nomena, which occur so frequently in cases of aortic insufficiency. Examination of the urine shows that it contains a large quantity of albumin, and microscopically contains casts of all sorts. The case was interpreted in this way, that we had to do not with a diseased heart or with a diseased kidney, but a disease of the blood vessels, with cardiac and renal changes secondary to it; that these arterial changes had brought about a minimal degree of insufficiency of the aortic valves, and in addition the same changes had so weakened the aortic wall that the aorta was dilated. Whether or not this should be considered simply a case of dilatation of the aorta or an aneurysm of the aorta, appears to me is a matter of play upon words. It is a matter of no consequence whether we describe it as a dilatation or an aneurysm.

A skiagraph shows enlargement of the heart to the left, and to the left of the sternum is a faint shadow by no means as distinct as shadows from aneurysms frequently are, but sufficient to show that the aorta is materially increased in its transverse diameter, and sufficient to warrant us in calling the case one of aneurysm. If anyone should prefer to call it dilatation of the aorta, I should not quarrel with him.

The case is in no way remarkable from an aneurysmal point of view, but it draws attention to the fact very distinctly that in many of these cases aneurysm is merely an incident. In this case it is an incident in the course of serious generalized disease. There are changes in the heart itself, changes in the kidney, which are far more important to the patient than the changes in the aorta.

I might say, before yielding the floor, that the particular purpose in having these patients here tonight, and the number shown to you could be multiplied, was to draw renewed attention to the fact that aneurysms of the aorta are not uncommon. No two cases are alike, and anybody who thinks, in order to make a diagnosis of aneurysm, he must have auscultatory phenomena coming on very early is mistaken, because many of the most serious cases of aortic aneurysm, who present themselves, have very few or no auscultatory phenomena. Later on, I should like to draw attention to certain other phenomena in connection with these cases in the discussion.

General Discussion.

Dr. Frank Billings: I did not name many of the negative symptoms present in the case I presented, simply because I did not desire to take up so much time, nor do I wish to do so now. The chief point I would like to say something about is dilatation of the aorta spoken of by Dr. Preble, and which you may call aneurysm in a certain sense, fusiform in character, and sacculated aneurysm. In the last few years I have had several cases in whom I have made a diagnosis of dilated aorta, and of all of the cases that have come to autopsy (more than half of them) that diagnosis was verified. Of the cases I have observed, all but one have occurred in elderly people, much older than any of the patients that have been exhibited tonight,

in people in whom we would expect to find atheroma, and sclerosis of the vessels; not necessarily in people who have led laborious lives, who have over-exerted themselves, not in people necessarily who have been unduly familiar with the flowing bowl, as is common in patients who suffer from aneurysm. Among the main things noticed in taking the history was an incompetent heart; it made no difference whether it was dyspnea alone, or associated with pain in the chest. The physical signs show in every case, I think, dullness over the upper sternum laterally, from right to left, and extending from the heart upward, and usually toward the right sternoclavicular junction. The aorta could not always be felt in the suprasternal notch. There was not necessarily a murmur, but in many of them there was; if not a murmur, there was an accentuation of the second aortic tone. If the aortic ring was stretched, or if the aortic valves were sclerosed and shrunken, there would be aortic regurgitation. It is not necessary for me to mention the ordinary signs, including even hypertrophy of the left ventricle. Those are the main things and differ entirely, so far as pressure symptoms are concerned, from a sacculated aneurysm. As Dr. Preble has said, it does not make much difference whether you call the case one of dilatation of the aorta or aneurysm of the aorta. Percussion dullness over the upper sternum is the main thing, and either accentuation of the second aortic sound, or the diastolic murmur which goes with it.

There is one other condition which I have run into and made a mistake twice. I recall the case of a man in whom I made a diagnosis of aneurysm, because he had dullness extending high up along the sternum, not as markedly as in the case which I presented tonight. The area of dullness was not as wide, but with this dullness there was some hypertrophy of the left ventricle, with a murmur at the apex that was like a mitral insufficiency murmur, systolic in time, and transmitted to the left. He also had an aortic murmur, diastolic in time, that was not constant. His pulse was slow, with the Stokes-Adams phenomena. His pulse was as low as 22 per minute, and in all the time I observed him it was never more than 40. I thought he had an aneurysm of the aorta. I took a skiagram of him, showed the patient to the members of the Illinois State Medical Society as a case of probable aneurysm of the aorta, with Stokes-Adams phenomena. He died suddenly at the hospital. He tried to get up from bed and dropped dead on the floor. Post-mortem examination revealed an enormously dilated heart, and both ventricles dilated to the extent that the heart was incompetent. There was mitral insufficiency, relative only, not a real one, and the aortic valves were apparently competent. The interventricular septum was stretched and thin, like a thin piece of paper. This case was worked up by Dr. Basso, the pathologist of the hospital, who found that the more recent pathologists speak of the Stokes-Adams phenomena, as undoubtedly due to this stretching and thinning of the interventricular septum, with dilatation of the heart.

At the Presbyterian Hospital again I made

a diagnosis of large aneurysm of the aorta, so large apparently that it extended up on the left side of the chest as in the case presented tonight. In that case the radial pulses were different and the difference extended even to the brachial and subclavian arteries, so that there was no anomaly in the size of the radials which would account for it. He had no disturbance of the larynx, so far as paralysis was concerned, but his voice was weak at times, at others it was harsh. He was short of breath; had pain in the chest; had a cough. The pain in the chest was most marked on exertion from an incompetent heart probably, and in this, as in the other case, I made a diagnosis of aneurysm of the transverse arch of the aorta because of the signs he presented. He had murmurs, systolic in time, which could be heard at the apex, and a diastolic murmur which could be heard at the aortic orifice.

Post-mortem examination in this case showed an enormously enlarged and dilated heart, with the left auricle running up the left side of the chest, which caused the dullness in that area.

I have thought it worth while to report these two cases in the discussion, and to point out the mistakes I made.

Dr. Robert H. Babcock: I should like to say, with reference to the case I presented, that an X-Ray picture was taken in the hospital, but I could not learn anything about it. A sphygmographic tracing was not taken, nor a blood pressure register.

With reference to the difference in the two pulses in my case, there is one thing which I omitted to state, and that is, the two common carotids appear to be symmetrical. The difference is in the subclavian and the arteries from that point downwards, which suggests that there is either a twisting or pressure brought to bear upon the subclavian. It is interesting that it should be limited to the subclavian when its origin is not far from the left common carotid.

The point brought out by the President, (Dr. Preble), with reference to the frequency of aneurysms in colored people is very pertinent, so much so that it is surprising we do not have more cases of aneurysm in colored people here tonight. There is a colored woman in ward 24 of the Cook County Hospital who has probably an aortic aneurysm. In the Johns Hopkins Hospital the colored ward has several cases all the time either aortic aneurysm or of aortic insufficiency. Aortic insufficiency secondary to arterial disease is so common among the colored people that I understand in Osler's service in the Johns Hopkins Hospital they have termed the colored ward the Corrigan ward.

It is gratifying to me to have Dr. Billings make so frank a confession as to diagnostic errors, because I have so many times either slipped up grievously in my diagnosis, or have been absolutely uncertain about it. I take fresh heart when a man of Dr. Billings' experience says he has made similar mistakes. It is notoriously difficult in many cases to make an early diagnosis of aortic aneurysm; but when the pressure effects become marked, and there is

a visible tumor, the diagnosis is comparatively easy, as has been shown tonight; but in early cases, where the aneurysms are small and deeply seated, a correct interpretation of the case is often absolutely impossible without an X-Ray examination.

Cases of dilated aorta associated with incompetence of the valve are very interesting and often puzzling, but in my experience marked pressure effects are rarely seen.

I believe that in making a diagnosis of aortic aneurysm physicians should be specially impressed with the relative unimportance, from a certain standpoint, of auscultatory phenomena, since when present they may or may not be very characteristic; indeed, auscultatory phenomena are so frequently absent that one must rely on other methods of examination, and physicians should be very careful to examine every suspected case by inspection, palpation, and percussion. I believe inspection and palpation are of the greatest importance in these cases; sometimes even when the aneurysms are small, careful inspection in different lights will reveal some circumscribed area of pulsation or prominence which would escape ordinary observation.

I was gratified recently, while on a visit to Baltimore to see Osler in his out-patient clinic, in which he presented some cases of aortic aneurysm, dwell with special emphasis on the importance and necessity of careful inspection and palpation in these cases.

Dr. C. A. Elliott: I have nothing in particular to add except to point out the fact that the gelatine treatment for aneurysm seems to have dropped out of use. In the case I reported tonight the gelatine treatment had no beneficial effect, and only resulted in harm.

Dr. Charles L. Mix: I have nothing further to add except to say, that I have been accustomed to look upon the chief signs of dilatation of the aorta as being the ones to which Huchard first called attention, namely, dullness in the second interspace to the right of the sternum; occasionally, but not frequently, in the third interspace to the right; and quite pronounced pulsation in the suprasternal notch. This pulsation in the suprasternal notch is due to the fact that the aorta dilates in two directions, longitudinally and transversely. It stretches in length, so to speak, so that the arch rises to a higher level. Anatomically, the summit of the arch is about half an inch from the edge of the suprasternal notch, and it is an easy matter for it to rise another quarter of an inch so as to be easily palpable.

There is one subjective sign to which attention has been called, which, I think, is of some value in dilatation of the arch, and that is a peculiar burning pain. This has been explained as being due to the effect of the stretching of the sensory nerves which are known to lie in the aortic wall. In running for a street car or a train we have all of us doubtless experienced a burning pain beneath the sternum. Schroetter, of Vienna, in Nothnagel's *Specielle Pathologie*, in writing upon the diseases of the arteries, mentions this symptom in connec-

tion with dilatation of the arch of the aorta. It is akin to the pain of aneurysm, and yet has a peculiar burning characteristic. I am accustomed to ask the patient concerning this symptom, and to look for the two physical signs mentioned—dullness in the second interspace to the right of the sternum which we almost invariably find with careful percussion, and marked pulsation in the suprasternal notch.

Dr. R. B. Preble: I would like to say a few words in regard to diagnosis. One must admit the possibility of error in the diagnosis of aneurysm, and yet this possibility is easily understood. While in a pathological sense an aneurysm is not a tumor, it is in a certain sense a tumor of the mediastinum. The symptoms of tumors which develop in the mediastinum, whether aneurysms or some other form of tumor may be classified as follows: There are physical signs which result from the interpolation into the mediastinum of a foreign body—in this case an aneurysm. There is a second set of symptoms the result of pressure produced by this tumor upon other organs. It makes no difference what this tumor in the mediastinum may be, so far as its exact pathology is concerned, the physical signs are practically the same. There is but one sign which I regard as absolutely peculiar to aneurysm, and that is expansile pulsation; but such expansile pulsation of the thoracic aorta is so rare as to be of little aid to us in making a differentiation. It is perhaps too much to say that all expansile pulsating tumors which appear either anteriorly or posteriorly over the thorax are aneurysms, because it happens occasionally that we see in this area pulsating empyemas, but such cases are so rare that they may be neglected in practice. The same thing may be said of the pressure symptoms, any one of them may be caused by any mediastinal tumor. In view of these facts error is easily made, and yet it should be kept in mind that with the exception of aneurysm all forms of mediastinal tumor are rare, and in cases of doubt the chances are always in favor of aneurysm rather than of some other mediastinal tumor. Of course, if we have to do with a child, in whom aneurysm has practically never occurred, the rule does not hold; but in adult life, it is a good rule to follow.

I think a word might be said in regard to the prognosis in these cases. One would off-hand say that a large aneurysm was more dangerous than a small, yet I think those who have had considerable experience with aneurysms will say that this is not so. Those who have had much to do with the service at the County Hospital will recall the case of a man Howard who has a very large aneurysm of the aorta who has been coming and going year after year, while many other cases with very indefinite signs and symptoms have died there. One may say that the prognosis of aneurysm is determined not by its size, but by its site. There are certain portions of the aorta in which the aneurysms are rapidly fatal, while in other portions of it the aneurysms can develop and attain very large size and continue for years without seriously shortening the life of the

patient. Among the serious cases of aneurysm are those which Dr. Babcock mentioned, namely, aneurysms developing in that portion of the transverse arch where the aorta crosses the left bronchus, and where between the aorta and the left bronchus lies the left recurrent laryngeal nerve. In such cases the prognosis is extremely grave because of the great danger of ulceration of the bronchus and fatal hemorrhage.

It may not be out of place to again refer to a case which I reported two or three years ago at a meeting of the Illinois State Medical Society, in which there were none of the ordinary phenomena of aneurysm, but simply evidence of a moderate amount of obstruction of the left bronchus, with irregular paroxysms of dyspnea and dysphagia, the signs and symptoms leading one to infer that there was pressure on the left bronchus where the laryngeal nerve lay across the left bronchus, the irritation of the laryngeal nerve serving as an explanation of the recurrent attacks of dyspnea and dysphagia, pressure on the bronchus being an explanation of the physical signs of the left lung. Such a clinical picture as that can result from any tumor in that region; yet in view of the age of the man, who was about forty, and other phenomena, a probable diagnosis of aneurysm of the aorta was made. This diagnosis carried with it the prognosis of a probable hemorrhage within a short period of time and the subsequent history proved the correctness of diagnosis and prognosis for the man died from a pulmonary hemorrhage six weeks later and only three months after the appearance of first symptom.

Dr. Arthur Dean Bevan: The question brought up by the President (Dr. Preble) of the differentiation between mediastinal tumors and aneurysm of the aorta is interesting to me, and there is one point which has not been mentioned in this connection that I regard of importance, namely, making this differential diagnosis by the X-Ray. We have at the Presbyterian Hospital noted three types of masses within the chest, as shown by the X-Ray, and these present some points which seem to be of great value in making the differential diagnosis. The aneurysmal outline is almost always a regular curved outline, as shown by the pictures exhibited here tonight. On the other hand malignant growths as mediastinal tumors invariably have an infiltrating outline, if primary, as shown by the X-Ray. Other pathological processes in the mediastinum, such as syphilitic and bronchial glands, have an infiltrating or an irregular, curved outline. I think these points are of value in making the differential diagnosis. As an evidence of the difficulties in making this differential diagnosis I want to state that within three years I assisted at an operation in a case in which a positive diagnosis of mediastinal tumor was made by half a dozen good clinicians, aneurysm of the aorta having been eliminated. The mediastinal space was opened with the intention of removing the tumor; the patient died on the table. An immediate post-mortem was made, and it

proved to be an aneurysm of the aorta about the size of a fist.

Pneumococcus Endocarditis.

Dr. Frank Billings: I have had some specimens brought here tonight, and want to say a word or two about them. Both of these cases, of which I have specimens, are cases of pneumococcus endocarditis. The first case was a woman, twenty-two years of age, who gave a history of incompetent heart of about five years' standing, preceding acute symptoms, which brought her to the hospital. There was no history of rheumatism as the cause of heart disease. She came complaining of incompetency of the heart. She had some temperature. There was no sign of pneumonia. Blood cultures were made, and the pneumococcus was found. The woman subsequently died. When admitted to the hospital a loud presystolic murmur was heard at the apex. A murmur was heard later over the lower sternum, but never a systolic murmur which would enable one to make a diagnosis of tricuspid disease. The diagnosis that was made, after the finding of the pneumococcus, was acute endocarditis of pneumococcus origin, with an old probable mitral stenosis. You will observe the form of mitral stenosis in the specimen which I pass about. You will see that it is a funnel-shaped mitral stenosis, and occurring in a woman may be due to chlorosis, or it was congenital. There was also a valvulitis due to acute endocarditis. You can see the vegetations. It was an old endocarditis associated with a funnel-shaped mitral stenosis, as it is called. We sometimes have an acute endocarditis engrafted on an old endocardial lesion. Here was an acute infection by the pneumococcus without a history of pneumonia. As you know, the pneumococcus is a germ that gains entrance into the body, affects not only the lungs as an acute frank pneumonia, but may infect almost any part of the body. It occurs as a septicemia with pneumonia, and in probably many other conditions, with the result that it may cause an acute endocarditis, especially if these be an old endocarditis.

The next case was a boy, eighteen years of age, who gave a history of rheumatism at five and ten years of age. During the second attack there was shortness of breath, or following it, so that we know the boy had an old endocarditis. He was admitted to the hospital on February 27 of this year, and died March 21. He gave a history of incompetent heart, and of illness of an acute character dating back three or four weeks. Patient never had a cough sufficient to say that he had pneumonia, or pain about the chest or back; nor had he had a chill. On examining him after admission it was found that he had some rise of temperature, with a rapid irregular heart; but the temperature at no time during his stay in the hospital was high; 99° to 100° was the usual range, but I believe it ran higher than that once. Examination showed an enormous heart extending far beyond the nipple on the left and on the right side one inch beyond the sternum. The apex beat was plainly seen in the anterior axillary line. There was hypertro-

phy of the heart, with a loud systolic murmur heard at the apex, transmitted to the left. This murmur was heard all over the heart, and heard also in the back. There was an accentuation of the second pulmonic tone. He had mitral insufficiency with dilatation of the heart. As I have said, he had incompetent heart, shortness of breath, compelling him to sit up. Friction sounds were heard at different times over both sides of the chest. He had pain when he coughed, with bloody expectoration. A diagnosis was made of infarcts of lung. A culture of the blood was made and the pneumococcus found. The diagnosis was then made of acute endocarditis of pneumococcus origin. Post-mortem examination showed the conditions absolutely as made anatomically. He had a large heart, with incompetent mitral valves, with vegetations along the aortic, mitral and tricuspid valves. He had infarcts in both lungs; double pleurisy; infarcts in the lungs, spleen and kidneys.

A regular meeting was held April 20, 1904, with the President, Dr. R. B. Preble, in the chair.

Dr. Sanger Brown read a paper entitled **Hypodermatic Injection of Strychnia Nitrate in the Treatment of Progressive Muscular Atrophy.**

Sanger Brown: Soon after the publication of the new edition of Quain's Dictionary of Medicine in 1895, I was surprised to notice in the article on progressive muscular atrophy, by Sir William Gowers of London, how hopefully he expressed himself regarding the value of strychnia nitrate given hypodermatically in the treatment of that disease. My surprise was the greater because he had previously stated in his text book on Diseases of the Nervous System the commonly accepted view that the malady lay without the range of therapeutics.

I do not know to whom belongs the credit of originating this method and first asserting or demonstrating its value, but since it came to my notice I have embraced every opportunity of using it, and while my results have not been so happy as Prof. Gowers' statements in the article above referred to might have prepared me to expect—and according to the last edition of his text book above mentioned, he has modified his formerly expressed views somewhat—they have nevertheless been highly satisfactory in some instances, and prompt me to publish the clinical notes given below. Furthermore, I might add, judging from conversation with my confreres and the perusal of current medical literature, this measure of treatment has not received anything like the attention it deserves.

For an adult the dose should be 1-25 of a grain once daily for six weeks, resumed after an intermission of two weeks, and so on until several courses have been taken. Though many patients can bear a larger dose than this without exhibiting unpleasant symptoms, I have had better results when I did not yield to the impulse sometimes experienced, to administer a larger quantity. Possibly a certain amount of

the drug might act as a tonic and restorative to the degenerating neurone while more might accelerate the process of decay.

It appears that no other form of strychnia than the nitrate given hypodermatically, and no form whatever, not even the nitrate itself, given by the mouth, can influence the course of the disease favorably. That the nitrate is a comparatively volatile substance and that it is not exposed to the action of the digestive secretions is somewhat suggestive of a possible specific incidence when given subcutaneously.

Apart from the muscular dystrophies, different authors have separated progressive muscular atrophy into types according to (1) age, (2) distribution of the atrophied muscles, (3) condition of affected muscles as to tonicity and (4) supposed nature of the pathological process affecting the neurones concerned; consequently in the literature are found such terms as (a) juvenile type, (b) progressive bulbar paralysis, scapulohumeral type, (c) amyotrophic lateral sclerosis (tonic or spastic type) and (d) chronic anterior poliomyelitis.

The propriety of such divisions cannot be discussed here. They are certainly not yet founded upon a firmly established pathological basis. Inasmuch, however, as they all present positive evidence of muscular wasting, due to destructive changes in the peripheral motor neurone no principle of medical nomenclature is violated by, for the present, at least, employing the term progressive muscular atrophy as properly applicable to them all.

Viewed from this general point, there are wide variations in symptoms, but so far, my rather limited experience with the treatment herein described does not prompt me to attempt to group cases with reference to their curability, though it would not seem unreasonable to expect that future research might furnish data from which such calculations could be made. Again, it would appear that the variable nature of the pathologic process going on in the neurone body, as inferred from the progress of the symptoms in different cases, suggests a variation in the dosage. That is to say, in a rapidly progressive case, where the destructive (degenerative or perhaps even inflammatory) process was comparatively active, strychnia given to the extent of causing twitching or hypertonicity in healthy muscles by its effect on their respective neurones would almost certainly add fuel to the flame, albeit just here the practitioner might feel impelled to push his remedy. Moreover, in these rapidly advancing cases my success has been least, and it does not now seem to me improbable that a much smaller dose than I gave would better have been employed, if indeed any degree whatsoever of this sort of medication could have been beneficial.

Case I. Referred to me during the summer of 1896, by Dr. T. M. Hardie, whom he had consulted for hoarseness. Man of 25, single, salesman in millinery store. Correct habits, nothing significant in personal or family history. Three or four months before began to suffer

from hoarseness, which had steadily increased, and for about the same length of time his left arm had grown progressively weaker, especially noticeable when he had occasion to raise a package to a shelf above his head. Had suffered no pain or paresthesia, and though his appetite had not been as strong as it ought to have been, he had regarded his general health as fairly satisfactory. Examination showed no sensory changes; superficial and deep reflexes normal, and nothing in the viscera or elsewhere demanding comment. The left vocal cord was paralyzed (Dr. T. Melville Hardie). The presence of the left sterno-cleido-mastoid could not be demonstrated, either by inspection or palpation—electrical tests were not made; the upper border of the left trapezius was much wasted, as shown by comparing the contour of the two sides of the neck. The patient was taught the use of the hypodermic syringe and sent home (several hundred miles from Chicago). He was directed to inject strychnia nitrate, grs. 1-30 once a day for six weeks, discontinue two weeks and then resume six weeks more. I heard nothing further from him till March, 1900, when he unexpectedly called to report, saying it was his first visit to Chicago since he had left it to begin treatment. The muscles previously atrophied appeared to be entirely restored. The patient stated that his malady did not progress after the second week, and by the fourth week he had certainly begun to improve. At the end of three or four months he regarded himself as cured and permanently discontinued treatment. In the meantime, there had been some improvement in appetite and general vigor.

Case II. September, 1896. Gentlewoman of 21, single, habits correct; nothing of moment in personal or family history. About three months before first noticed weakness of right hand, especially in buttoning clothing (a defect commonly cited when the disease begins in the hands); soon after some flattening of thenar eminence. Slight paresthesia about radial side of hand occurred early, but patient could not be certain if it preceded or followed the commencement of weakness. The atrophy had steadily advanced and extended to the interosseous spaces and also to the muscles of the forearm. Twitching in the wasting muscles had also been noticed. Three or four weeks before I saw her, the disease had made its appearance in the left hand and followed a similar course to that described in reference to the right. The muscles affected were flaccid and no hypertonicity was apparent anywhere, except that the knee jerks were much increased and there was ankle clonus. I may say here, parenthetically, that this condition of the lower extremities has been accounted for in similar cases and supported by anatomical findings too, by supposing such a lateral extension of the pathological process in the cervical cord as to slightly involve the crossed pyramidal tracts. There was no pain or tenderness, and sensation was not impaired even in the parts where slight paresthesia existed. The general health was satisfactory, and a careful examination revealed nothing demanding comment beyond the condition of the wasted muscles. In them flickering was

frequent and pronounced and degeneration reaction was easily demonstrated.

Though not living in the city, the family physician was present at the examination and the same treatment was advised as in Case I. Ultimately, through involvement of respiratory centers in the medulla, and without any material arrest in the march of the symptoms, a fatal result was reached in about two years. But the treatment was not carried out according to directions, as the physician afterwards informed me. Improvement not appearing as promptly as he had hoped, he soon began to increase the dose and carried it to such point that for several months he gave her "all she would stand," even 1-8 of a grain twice a day.

Case III. June, 1899. Sister of Charity, age 41; a few months before noticed marked paresthesia about radial side of hand, involving thumb and index finger. Somewhat later weakness and wasting appeared in thenar muscles and index finger, the latter growing somewhat small and pointed, as she expressed it. A few weeks before I saw her paresthesia made its appearance in the left hand, as it had previously done in the right, followed by weakness and wasting. The patient was in good health, and had been so throughout. In the hand first affected, perceptible wasting had not extended beyond the thenar muscles and those of the index finger, and in the other only the muscles of the thumb were visibly involved; and these, though distinctly, not greatly so. Degeneration reaction could be demonstrated in the thenar muscles of the right hand, and the superficial and deep reflexes were normal. I saw this case repeatedly at intervals varying from a few weeks to two months for over two years, when the patient was assigned to duty in a distant state. There appeared to be an element of hysteria in the sensory symptoms, inasmuch as while the paresthesia lasted the area involved by it presented variations in the reaction to touch and pin pricks between distinct reduction and normal. The treatment was carefully carried out. Three six weeks courses with intervals of two weeks were given at the outset, and afterwards three six weeks courses at irregular intervals, because the patient fancied she felt a slight return of the paresthesia. One-twenty-fifth of a grain of strychnia nitrate was used throughout. Distinct improvement was noticed after the first few weeks and continued for several months until no atrophy or weakness was discernable in the hand last affected, and the other had grown much stronger, with considerable restitution of the wasted muscles. With the exception of an occasional suggestion of a slight return of the paresthesia, which may have been hysterical and due to over anxiety on the part of the patient, there has been no return of the symptoms.

Case IV. In October, 1900, there came to my clinic at the Post Graduate School, a carriage painter 34 years of age, married and intemperate. He was a well-nourished man and said his general health had been good, except that during the past seven or eight years he had suffered from several attacks of painters' colic, and during about the same period had also on

several occasions been affected with lead palsy or wrist drop. He had always made good recoveries from both conditions under treatment, except that for the last two or three years extension in the wrists had not been quite as strong as formerly. About ten months ago the wrists began to grow weaker, more slowly than in previous attacks, and in addition to this the thumbs became very weak, especially the right, as he could no longer hold his brush well. Progressive wasting was now noticed, first in the thenar muscles, then in the interossei, and lastly, in the muscles of the forearms. In the right hand the disease was a month or two in advance of the left from the first, i. e., in this present instance, while in previous attacks they had been affected about equally and simultaneously. At no time had there been any pain, paresthesia or anesthesia. Examination showed nothing worthy of comment outside of the wasted muscles. Sensation was perfect, and the reflexes were not materially altered, except, of course, in the atrophied muscles, which were flaccid. The hands were practically useless and the wasting of their muscles extreme. The metacarpal bone of the thumb was in a plane with that of the fingers. Improvement under treatment as specified in the other cases was prompt and pronounced. It was continued for about ten weeks, the patient coming daily to the clinic. Toward the end of this time, however, he so frequently presented himself in a drunk and disorderly condition, that his further attendance was discouraged, and he was lost sight of, after having regained considerable use of the hands.

While as previously stated, this method of treatment has in my hands fallen short of the expectations I had formed of it, nevertheless it has gone a long way to dissipate the horrible sense of discouragement, depression or even despair which the prognostic contemplation of these cases hitherto aroused.

In conclusion it should be added that the value of hygienic measures and the judicious use of electricity, massage and gymnastics, always recognized as of great importance, is rather enhanced than otherwise, when used in conjunction with the strychnia treatment herein advocated.

Dr. C. J. Lewis: I would like to inquire whether the essayist has formed any conception as to why it is that the salt nitrate acts preferably to the sulphate. While I am on my feet. I want to state the difficulty we have with these cases. I have not had many of them, but I re-call one that came under my observation two or three years ago. The patient was a child jumping from a platform about six feet high, had progressive atrophy commence in the muscles below the knees, progressing for about six months. After this one limb gradually recovered. I could not account for the recovery of this any more than the failure of the other. I want to know to, whether it is on account of the nitrogen element that this salt is better than the others.

Dr. A. W. Baer: The paper just read by Dr. Brown is interesting. As regards why the nitrate works better than any other salt of

strychnia, I should say that the nitrate is a little more soluble than the sulphate, although the latter is one of the most soluble salts of strychnia.

With reference to the use of the hypodermic syringe, the physician needs to be very careful to whom he recommends it for continued use. This was well illustrated by one of Dr. Brown's cases, where the patient used a great deal more of the drug than he told him to do. I find that the case too often. Personally, I have had several cases in the last year and a half in which I have used the continuous current, and have obtained better results with it than by anything else.

As regards using electricity with strychnia, I have not had good results from the combination. I have thought one interfered with the good effects of the other.

Dr. Brown (closing the discussion): In reply to Dr. Lewis' question, as the last speaker (Dr. Baer) has just said, it is thought that the superior efficacy of the nitrate is due to the fact that it is a more volatile salt. Given subcutaneously it is not so likely to be decomposed as taken through the stomach. An important point should be remembered, namely, that we do not get in this method of treatment the so-called physiological action; we do not carry it to that extent. In these small doses, it may have a specific action. I do not base my conclusion as to the efficacy of this remedy alone on the cases I have reported for I have had other cases which were successfully treated by this method, however, I am not in a position to take such a sanguine view of this treatment as does Dr. Gowers in his article in Quain's Dictionary, to which I referred in my paper, in this he stated that he had had seven consecutive cases where the disease had been arrested by this method in a few months, and in all but two the results had been permanent. The report of Dr. Gowers, who himself is I believe quite a therapeutic skeptic, stimulated me to use this drug in the way I have described. It is true, these cases are not common, but if practitioners will employ this method more generally, we can determine whether or not these results are mere coincidences. As the disease occasionally undergoes a temporary or permanent remission.

Cystic Kidney.

Dr. F. Kreissl: Taking this specimen out of the jar, I find, to my regret, that the principal part of it which I desired to exhibit, the renal pelvis and upper part of the ureter, must have been lost en route from the operating room to the laboratory. However, a study of the accompanying X-Ray picture and the history of the case might be of some interest, inasmuch as they illustrate the fallacies of X-Ray diagnosis in certain kidney diseases. There is a dense, well-defined shadow in the region of the right kidney, which, taken together with the other symptoms in this case, pain in the right lumbar region, radiating down along the ureter, and pus in the urine, obtained through the ureteral catheter, would easily induce one to diagnose renal calculus. Making a lumbar

incision, I found the kidney over twice its normal size, consisting of numerous cysts, whose wall in some places was as thin as tissue paper.

The ureter joined the very distended infundibulum much higher up than usual, and its pelvic orifice was obstructed by a valve, which permitted the downward passage of a small-sized probe only, while I had no difficulty at all in entering the renal pelvis with a ureteral catheter, 8 French, previous to the operation. It is a case of cystopyonephrosis, apparently originating from the congenital defect at the renal orifice of the ureter. The patient, 29 years old, made an uneventful recovery. The urine cleared up within twenty-four hours after the nephrectomy. The left kidney worked well immediately after the operation, which I anticipated from the satisfactory result of a functional test I made a week before.

Renal Calculus of Unusual Size.

This specimen is from the right kidney of a patient, 41 years old, sent to me by Dr. A. C. Croftan. The short history given me is this: He had renal colic on the left side in November, 1891; shortly afterwards, and since that time, was unable to void urine in any other but the recumbent posture. March, 1892, a vesical calculus, removed by Dr. McArthur, by suprapubic lithotomy. Very soon again renal colic on the left side, appearing in longer or shorter intervals, until spring of 1903. X-Ray picture, taken at this time, negative. He was put on calcium carbonate medication by Dr. Croftan, following which no renal colic experienced for over six months.

October 25, 1903, urine retention, necessitating drawing of the urine for three days. The latter was alkaline, which was attributed to the calcium carbonate. In a cystoscopic examination, October 27th, I found a vesical calculus, purely phosphatic, of the size of a hazelnut, which I removed by lithotripsy. The subjective symptoms of the cystitis yielded to local treatment within a few weeks following the operation, but the urine remained turbid and alkaline. December 22d, he returned, with dull pain in the right lumbar region, and severe tenesmus. Through the cystoscope the bladder wall looked normal, with the exception of a small congested area near the right ureter. Catheterizing both ureters simultaneously, I collected 50 c.c. of clear and acid urine from the left kidney, and 100 c.c. of cloudy, alkaline urine from the right, which first came in a continuous stream, and with great force, as I have always observed in hydronephrosis and pyelitis with pelvo-renal retention. Here follows the result of the urine examination, furnished by Dr. Croftan:

	Right.	Left.
Quantity, 100 c.c.		50 c.c.
Reaction, Alkaline (!)		Acid.
Spec. Grav., 1019		1016.
Urea, 1.4 per cent		0.2 per cent
Color, Yellow (cloudy)		Yellow (clear)
Sediment, right, Pus abundant. Few red blood cells; abundant crystals of calcium oxalate; amorphous urates, and staphylococcus.		

Left, No pus. No blood. No staphylococcus. Urine sterile. Ordinary sediment, with excess of oxalate and urate crystals.

I irrigated the right renal pelvis with oxy-cyanide of mercury solution, and injected 4 c.c. of a 1 to 1000 nitrate of silver solution before withdrawing the ureteral catheter. Urotropin internally, and the same application repeated every third day for three weeks, did not change the condition of the urine, although there was temporary relief from lumbar pain for a day or so following each ureteral catheterization. An X-Ray exposure of the right kidney on January 25, 1904, showed two small shadows, as you may observe on the photograph. February 14th, making a lumbar incision on the right side, I exposed a very large kidney, extending far up under the ribs, and the vault of the diaphragm, the pedicle shortened and stiffened by dense contracted tissue, which tucked the kidney close up against the spinal column. Much difficulty was experienced in freeing the stone from its encasement, from which it had to be cut out. After removing the larger upper part of the calculus, I was able to get at the smaller ones, which filled the infundibulum and extended in the ureter. The accompanying sketch conveys an idea of the situation of the stone in the kidney. Its total weight, including two calyx branches scooped out separately and lost, is two ounces. Though badly infected, I did not remove the kidney, because of its apparent much better functional activity than the one of its mate, as indicated by the previous result of the examination of the segregated urine. This conclusion was sustained by the fact that the bladder remained dry for forty-eight hours after the operation, while the dressings on the operated side were so much saturated that they had to be renewed every few hours.

An examination of a resected piece of the kidney by Dr. Croftan shows the parenchyma not involved, but an ascending infection of the uriniferous tubules. No miliary abscesses within the kidney substance. The glomeruli not involved. Patient made a good recovery. Here we meet again the defects in X-Ray diagnosis of kidney disease, which long before this induced me not to rely upon it, but to be guided by the clinical symptoms, occasionally supported by the result of urine segregation. The vast majority of suppurating or bleeding kidneys are at any rate surgical kidneys, at least warranting an exploratory lumbar incision or a nephrotomy.

Dr. Charles Spencer Williamson read a paper entitled the *Initial Lesion of Pulmonary Tuberculosis, and its Diagnosis*.

The question as to the initial lesion of tuberculosis has been so often made the subject of special investigation, that it would seem as if the matter must have been brought to a satisfactory conclusion long before now. Anyone who has seen many post mortems and paid close attention to the lungs must have been struck with two points. 1. The enormous frequency with which tuberculosis is found in the lungs of people regarded as perfectly healthy. 2. The extreme rarity of changes in

the lung which could be properly described as incipient, that is where the changes remain localized to that tissue where they first develop. It follows, therefore, in view of the comparative rarity of the truly incipient cases of tuberculosis on the autopsy table, that a very large material would be necessary in order to secure even a small number of cases for study. The systematic examination of a large autopsy material with a rigid exclusion of all cases where the tubercular process has extended beyond the tissue first involved, furnishes the only hope of a solution of this problem.

This was undertaken by Birch Hirschfeld of Leipzig, his observations extending over many years, and based upon an enormous material. My interest in this subject dates back about six years, at which time I had the pleasure of spending a year with Birch Hirschfeld in the Pathological Institute at Leipzig.

The initial lesion is of so slight an extent, that in the dissection of the lung ordinarily made, it may readily escape observation. By far the simplest and most certain way of detecting a very small focus of tuberculosis in the lung, is by careful palpation. On many occasions I have seen Birch Hirschfeld pick up a lung which had been pronounced normal, after a tolerably careful section made in the ordinary manner, and by palpating in his characteristic careful, painstaking manner, discover a small nodule hidden away beneath the apex, which had been overlooked. I have repeatedly had opportunities to satisfy myself that careful palpation of the exposed lung, is the only method to avoid overlooking small and inconspicuous foci. In an enormous series of autopsies of the above author, with a very high percentage of tuberculosis cases, but thirty-four were found where the lesion could be truly said to be incipient. The results and conclusions of his investigations will be briefly given here. 1. As to the location: of the thirty-four cases, the right upper lobe was affected in twenty-four, and in twenty-two of these in the domain of the ramus apicalis, only two being in the lower part of the upper lobe. In twelve the lesion was at, or just under the apex; in ten, from five to seven centimetres below the apex. In both the apical and sub-apical cases the posterior part was most often affected. This was equally true of the left lung, in nearly all of the cases bronchus apicalis posterior being first affected. In fifteen cases the left upper lobe was involved. In eight of these the right lung contained lesions of the same apparent age. Of the fifteen cases of primary involvement of the left upper lobe, the lesion was found ten times at, or immediately below, the apex, four times in the posterior sub-apical region, and once only in the anterior part of the superior third of the lobe. So far as the side first attacked is concerned, Laennec's idea that the right lung was most often involved, finds its confirmation in these figures.

The nature of the initial lesion Birch-Hirschfeld found to be a bronchitis caseosa, a true tuberculous bronchitis of the medium and

smaller sized bronchi. In these incipient cases no changes were found whatever upon the surface of the lung, especially no adhesions. Whenever adhesions were formed the lesion in the lung had already progressed beyond the stage when it could properly be termed incipient. It is not my purpose to describe in any detail the histology of bronchitis caseosa. In general, it consists of an invasion of the mucosa by small tubercles which coalesce gradually, just as in the case of the other mucous membranes. With the coalescence of the tubercles these undergo caseation, and later the mucous surface breaks down and ulceration takes place. In the case of the smaller bronchi the lumen may be entirely filled with caseous matter to such an extent, that on cross section the bronchus may closely resemble a conglomerate interstitial tubercle. Birch Hirschfeld believes that it has very frequently happened that cross-sections of bronchi with caseous bronchitis have been so interpreted. In twenty-eight cases of his series, the initial lesion was found to be a caseous bronchitis. In only three did he find an interstitial development of tubercles as the initial lesion. The currently accepted opinion that pulmonary tuberculosis begins as a focal caseous broncho-pneumonia, is thus seen to be not in consonance with the facts. Birch Hirschfeld concludes that such an origin must be exceedingly rare. More striking still is the fact that it is not the smallest bronchi i. e. bronchioles, which are affected, but those ranging from the third to the fifth order, counting the principal bronchus of the lobe as belonging to the first order. This fact should be borne carefully in mind as it gives us the key to the precise localization of the lesion. In a very careful study of the anatomy of the bronchial tree, Birch-Hirschfeld found that in the subpleural region bronchi of this particular size are to be found only in a few places, the prevalent caliber being that just preceding the lobular end branches.

On my first acquaintance with Birch-Hirschfeld, through many personal conversations and through the demonstration of much of his material some months before the publication of his *Arbeit*, I became interested in the question of the influence these researches would have upon the all-important question of diagnosis. I think it is well at this point to stop and consider just how extensive the primary lesion of the lung may be and still be called incipient. Clinicians have been accustomed to consider as still incipient, cases where percussion dullness may be obtained over the affected area, with harshened or even tubular, respiration, in short the signs of consolidation. Piörny and Friedreich showed that not until the lesion was four to six centimetres in circumference, could impaired resonance be obtained. Furthermore since the very beginning of the process is in the bronchial mucosa, to be followed only much later on, by the development of peri-bronchial nodules, and since the development of interstitial infiltration, especially of such a degree as to be clinically demonstrable, is of still later date, it is evident that the stage of infiltration cannot be properly reckoned as belonging to the true incipient stage. So long as the view

prevailed that the beginning of pulmonary tuberculosis is in the form of a broncho-pneumonic focus, it was perfectly proper to see in the physical signs of such a focus, i. e. physical signs of consolidation, the first clinical expression of the disease. With the demonstration of the fact that the areas of infiltration are preceded by a stage in which for a considerable period of time the bronchial wall alone is affected, this view must be given up. We may, therefore, properly define a truly incipient tuberculosis as one in which the disease is limited entirely to a bronchitis caseosa, everything beyond this being no longer truly incipient. I conceive it to be our problem to inquire as to what are the diagnostic criteria of the truly incipient case, a bronchitis tuberculosa. For the comparatively insignificant number of cases where the beginning is in the form of an interstitial development of tubercles, these remarks, of course, do not apply.

Bearing carefully in mind the pathological changes, let us reflect as to what would be of necessity the physical signs. It is evident that so long as the bronchitis tuberculosa is of moderate degree, that so long as it does not encroach too much upon the lumen, the physical signs will not differ in the least from those of an ordinary non-tuberculous localized bronchitis. We should find dry or moderately moist, rales over the affected area of a size corresponding to the size of the bronchus in which they originate. It is important to bear in mind that at this stage, these would be the only possible physical signs. Later on when the lumen becomes considerably obstructed, the breath sounds may become faint, almost inaudible, but not until a considerably later stage, not until consolidation takes place, can dullness, harshened or tubular breathing be obtained.

An important question at once arises, namely, is the detection of tubercle bacilli in the sputum possible in such a case. The question is not difficult to answer. In the early stage of a bronchitis tuberculosa, so long as the infiltration remains confined to the bronchial mucosa and sub-mucosa and no superficial ulceration occurs, no bacilli will be found in the sputum. With the progress of caseation, superficial ulceration occurs and the finding of the bacilli becomes a possibility. A little reflection will show that owing to the small amount of ulceration going on at this time, they must be exceedingly scanty and difficult of detection. We may say then that in the very beginning, owing to the nature of the process, bacilli cannot possibly be present in the sputum, and even when the ulceration does begin, they will be exceedingly few in number so long as the process is limited to a bronchitis tuberculosa.

Defining an incipient tuberculosis as I have done, it will be seen that such physical signs as dullness, or even impaired resonance, bronchial breathing, etc., cannot possibly be regarded as the expression of the real initial lesion. We must return therefore, to those signs which are diagnostic of bronchitis, and here again all physical diagnosis teaches us that the one sign which is constantly present

in any bronchitis is the dry or moist rale. Theoretically, therefore, the one physical sign which could be expected in the true incipient stage are rales, dry or moist, and of a size corresponding to the caliber of the tubes of the third to the fifth order.

On first becoming interested in the subject, some six years ago, I determined to examine every lung which came under my observation with any disease whatsoever, with the most scrupulous care, with special reference to this point.

Accepting my definition of an incipient tuberculosis, it will be at once seen that the number of cases becomes greatly diminished, as a large number do not come under observation until the real incipient stage has long since passed. In a paper of this length it is impossible to critically analyze any considerable number of cases, so that I will content myself by giving the results in the briefest possible form.

In twenty-one cases of truly incipient tuberculosis in private practice where I have been able to follow the cases for a sufficient length of time to place the diagnosis absolutely beyond question, no physical signs whatever beyond small or medium-sized moist rales could be obtained in eighteen. In the remaining three a few sibilant rales, with only an occasional small moist rale, were the only physical signs. In several, slightly harshened breathing was noted, but of such slight intensity as to be noted as doubtful. Of these twenty-one cases in which the diagnosis of bronchitis tuberculosa was made upon the basis of a localized apical bronchitis, nineteen gave a positive reaction with tuberculin, one gave a reaction of three-fifths of one degree with two milligrams, but for external reasons, a repetition with a larger dose could not be given. This case passed out of my treatment, but a number of months later returned with tubercle bacilli in the sputum. The remaining case gave a positive reaction, but as he was at that time suffering from a very recent infection with syphilis, I prefer to draw no deduction from the result. In but two cases could tubercle bacilli be demonstrated in the sputum, and then only in small numbers although all were examined by the centrifugal method.

I purposely avoid tabulating the results as to the precise location of the rales, except to say that they were heard considerably more frequently at the apex, especially posteriorly, than in the sub-apical region, where the initial lesion is found most frequent pathologically. I believe this to be due to the very much thicker covering of the sub-apical region, especially posteriorly, as compared with the apex.

It is not my purpose to enter into the symptomatology of these cases, as this is already well-known. Suffice it to say, that in a considerable number the subjective symptoms were not sufficient to attract the patient's attention, and the condition was found in the course of an examination for other affections. It is but natural to suppose that the symptoms would be very slight, when one excludes, as I have done, all cases from the incipient group when

any other of the physical signs were present than those of bronchitis caseosa.

It must not be forgotten that the diagnosis of caseous bronchitis is, in reality, one of inference only. What is in reality diagnosed by the physical signs, is a simple apical bronchitis. The value of these signs as indicative of tuberculosis, depends entirely upon the fact that such strictly localized lesions in the apical and sub-apical region, are, at least in those cases which come to autopsy, practically invariably tubercular. On the other hand the possibility must not be lost sight of that a simple non-tubercular bronchitis may localize itself exclusively in one or both apices. If this could be conclusively proven to be the case, the physical signs above mentioned would lose much of their value. Mistakes may be guarded against in two ways. First by observation of the patient for two or three weeks. If the apices be examined at intervals of several days, and each time the evidences of a strictly localized apical bronchitis be found, the diagnosis can in the immense majority of cases, be looked upon as fairly firmly established, quite irrespective of sputum findings. Unfortunately, in my experience at least, even these scanty physical findings are apt to come and go. I have examined many cases whose subsequent history established the diagnosis beyond all cavil, where for a month or two, absolutely the only physical signs were a limited number of medium-sized or small rales, just below the apex, which would appear and disappear, only to reappear again in the most exasperating manner. It is just in such cases that even the experienced diagnostician hesitates to commit himself to a positive diagnosis of tuberculosis on the basis of a physical examination alone. Heretofore the usual procedure has been to regard such cases as more or less suspicious, and to place them under observation. If at the end of perhaps a few weeks, a second examination shows the rales to have disappeared, the case is regarded as one of simple non-tubercular bronchitis. Against this I cannot too strongly protest. When we reflect how exceedingly slow the development of bronchitis caseosa is, and to what an extent the physical signs, i. e. rales, are dependent upon the amount of secretion present at the time in the affected area, it should not be regarded as anything unusual for them to be temporarily absent. Personally I believe the great majority of so-called doubtful cases of apical catarrh, to be cases of tuberculosis. It is not to be questioned that a large number of these, with very slight improvement in general hygiene, disappear entirely, consequently the fact that the physical signs clear up can by no means be regarded as a proof of the non-tubercular character of the affection. Furthermore I wish to protest most emphatically against the all too prevalent custom of permitting such cases to go for a considerable length of time, without coming to a definite, clean-cut conclusion, followed by the appropriate therapy. It is not my intention here to speak of the enormous mortality of tuberculosis, nor of the equally important chronic invalidism and incapacity for work which result from it. Believing as I emphati-

cally do, in the eminent curability of the disease in its early stage, and the well-known inefficiency of all treatment in the later stages, it can hardly be deemed an exaggeration to say that the diagnosis of pulmonary tuberculosis at the earliest possible moment, in its true incipency, is the most important practical problem confronting the physician of today. To let weeks and months slip by watching a suspicious case, is to let the golden opportunity pass by unused. Every energy should be bent towards establishing the diagnosis then and there. In this connection we have fortunately a powerful aid, but one which has been much neglected in America, in the shape of tuberculin. I find constantly opinions expressed among physicians as to the dangers attendant upon the use of tuberculin. After a pretty large experience in the use of tuberculin, I should like to briefly state my conclusions in the form of a summary, reserving the detailed analysis of cases for another occasion.

1. The use of tuberculin as a diagnostic agent should be limited strictly to such cases of suspected bronchitis tuberculosa as have been above described, where the diagnosis is really in doubt.

2. Used in the manner recommended, its use is unattended by danger and it has no deleterious effects.

3. In pulmonary tuberculosis, in the truly incipient stage, before the case has become one of mixed infection, tuberculin gives a positive reaction in at least ninety per cent of the cases. In the remainder the reaction is of a more or less doubtful character, or may, under extremely rare circumstances, be absent. In advanced cases, or even cases moderately advanced, where mixed infection is a pronounced feature, the use of tuberculin as a diagnostic agent is exceedingly unreliable, and probably never justifiable.

4. The evidence that other diseases, notably syphilis, may react positively to tuberculin is not conclusive. In the majority of these cases coincident infection in some obscure organ, with tuberculosis is highly probable. In any event the conditions which have been said to produce reactions with tuberculin, are such as would not enter seriously into a differential diagnosis.

5. The tuberculin reaction cannot be looked upon by itself as absolutely and conclusively certain, but taken in conjunction with doubtful physical signs in the lung, it establishes the diagnosis with practically absolute certainty.

Technique. The temperature should be taken every two hours for at least two full days before the injection. The initial dose for injection is, in my hands, best placed at one milligram, when the physical signs are very slight. When the physical signs are somewhat more pronounced, one-half milligram is a fair initial dose. The time of administration is best in the afternoon, as under these circumstances the reaction is most apt to follow between twelve and twenty-four hours afterwards. This permits the temperature to be taken during the daytime, the time when the reaction is most likely to occur. For at least forty-eight hours following the injection, the temperature

should be taken most carefully at two hour intervals. A positive general reaction may be regarded as having been obtained when the highest temperature following the injection exceeds the highest temperature before the injection, by at least one degree Fahrenheit. A well-marked positive reaction will frequently be indicated by a rise of two and one-half or even three degrees. If no rise follows the first injection, several days should be allowed to pass and a second given of three or four milligrams. If this results negatively, the dose should be increased to seven or eight, after a similar pause, and if then negative, increased to twelve milligrams. Any case not reacting with twelve milligrams may safely be excluded as not being one of active tuberculosis. Extreme care must be taken to have an absolutely fresh active tuberculin. In my earlier experimentation I found numerous cases which failed to react to twelve milligrams of one tuberculin preparation, which promptly reacted to one milligram of a fresh, reliable preparation. Too much stress cannot be laid upon this, for I believe it to be the source of most of the unsatisfactory results which have been obtained with tuberculin. In dilute solution, i. e. one or two per cent, it rapidly deteriorates and becomes unfit for use after a few days. Personally I invariably have an absolutely fresh solution made up for each injection. Since adopting this rule, I have obtained reactions with the greatest uniformity. The strength solution used for the injections is, I think, a matter for individual taste. I have found a two per cent solution, with one-half per cent carbolic acid added, most convenient.

In addition to the general reaction indicated by the temperature rise, there is a local reaction in the lung which consists pathologically of a slight inflammatory reaction, and clinically of an increase in the number of rales and slight harshening of the breath sounds. When this is well marked, as it sometimes is, it has equal value with the general reaction. In the majority of cases it is not sufficiently pronounced to be thoroughly decisive, and possesses this very serious disadvantage, in that it permits a dangerous amount of latitude to the individual judgment. A practiced auscultator in constant training, may detect differences not apparent to one who examines less frequently but upon differences of this character little weight should, I think, be laid.

Summary.

1. The initial lesion of pulmonary tuberculosis is, in almost every case, in the mucous membrane of the smaller bronchial tubes in the form of a true bronchitis tuberculosa.

2. Cases in which peri-bronchial infiltration, interstitial infiltration, or even small foci of caseous broncho-pneumonia are present, can no longer be considered as incipient.

3. It follows from the last conclusion that the physical signs of consolidation, such as impaired resonance, dullness, harshened or even bronchial breathing, are not to be considered as diagnostic of the truly incipient stage of tuberculosis.

Discussion.

Dr. Edwin W. Ryerson: With regard to the

use of tuberculin, I would like to ask the essayist whether he has seen any bad results following its use? About seven years ago, when we first began to read a good deal about it, those of us who are interested in tubercular joints were very much in favor of its use. We learned a great deal about it. I have seen six cases in which tuberculin was used for diagnostic purposes in suspected tubercular joints, in which very serious results followed. I was in Boston at that time, and nearly every practitioner there became afraid to use it in these debatable cases.

I want to find out, if possible, what the experience of the essayist has been in that line.

Dr. Alfred C. Croftan: What subjective symptoms, what temperature curve, would be produced by so infinitesimal a lesion, and what would induce a patient so afflicted to consult a physician? Personally, I do not believe that so slight an affection of a bronchiolus can produce any physical signs whatsoever. I do not believe that it can be diagnosed, nor that it can even ever be found by chance in a living subject.

However, interesting and instructive, therefore, the clear and thorough demonstration of Dr. Williamson may be from an etiological and pathological standpoint, it is of little value from the clinical standpoint of the diagnostician. I ask Dr. Williamson whether, in his opinion, a patient afflicted in the way he describes would present any one of the signs that are so characteristic, for what I should like to call "early" tubercular involvement of the apex, in contradistinction to the "incipient" involvement he describes. I refer to such common signs as the dilatation of the pupil on the affected side from irritation of the sympathetic fibers in the apical region, the pain elicited on pressure deep down into the supraclavicular region, the well-known auscultatory and percutory signs, the tuberculin reaction, etc.

In speaking of the tuberculin reaction, I want to hear Dr. Williamson's experience with iodide of potash in place of tuberculin in such cases as he describes. I have used it occasionally. I consider it dangerous, as I do tuberculin, but I believe that in some of the early cases it is possible by giving this drug for diagnostic purposes to produce what may be called a liquefaction of the infected focus, with increased moist rales over the suspicious area.

Has the statement been absolutely demonstrated that a tuberculous lesion of such a slight character is always primarily a lesion of the bronchiolar mucosa, and is it always an air-borne thing? Is there not a great deal of evidence to show that in many of these cases the lesion involves primarily the lymphatic apparatus surrounding the alveoli, and that the invasion of the bronchioles is a secondary phenomenon; the ulceration being produced by an erosion of the mucosa from behind? Personally, I am becoming more and more convinced that many of the mild pulmonary affections that are so common are blood-borne and not air-borne. The intricate lymphatic and capillary labyrinths of the lung are directly in the path of any bacilli that may come from the

large lymph channels entering the subclavian vein, and they are particularly adapted to catch and arrest such foreign bodies. It is a remarkable fact that in children in whom the periaxillary lymphatics are not developed, as in the adult, tuberculous lesions only rarely appear in the lungs, as compared with the great frequency with which they appear elsewhere in the body, notably in the meninges, the joints, the glands, etc. And children are certainly as much exposed to air-borne tuberculous infection as are adults. I do not believe that this clinical fact can be explained alone by the more or less hypothetical assumption that the intestinal mucosa in children is more vulnerable than in adults and more readily permits diaporesis of swallowed tubercle bacilli into the lymph stream.

Dr. George W. Webster: I think it goes without saying that when a clinician waits for the signs of pulmonary consumption, as evidenced by dullness on percussion, by bronchial breathing, or any of the other marked signs of pulmonary consolidation, he has waited for the whole clinical house to fall upon him. At the same time, it is perhaps drawing a very fine distinction to distinguish, as the Doctor has so carefully done, between incipient and what perhaps we might, for clinical purposes call the early stage of pulmonary tuberculosis. Following the Doctor's classification, which we are bound to call the incipient stage in these cases, I do not believe that such patients have any subjective symptoms that will bring them to our offices nor call us to see them. Furthermore, that under these circumstances the physical signs will be so slight that even for the expert they are beyond absolute demonstration.

I agree heartily with the essayist in the statement that these initial lesions in the early development of pulmonary tuberculosis take place in the anatomical region which he has described; but I do not believe, however, when it does develop in this situation, that it is usually an infection which has been carried to that point by the way of the bronchial tube through the inspired air. There are only three ways in which these bacilli may reach the tissues: (1) By way of the inspired air; (2) by way of the lymphatic paths, and (3) by way of the blood channels. By way of the lymphatic paths a comparatively small number gain entrance. I am one of those who believe that the relative importance of the air tubes or paths of infection have been greatly exaggerated, and that we have not given sufficient attention to or attached sufficient importance to infection by way of the blood channels. For instance, we may feed animals tuberculous sputum, and obtain tubercle bacilli in three hours from the thoracic duct; and under such circumstances there will be no lesion of the intestinal lacteals or anything to show where these tubercle bacilli entered the circulatory system. They go from there to the right side of the heart, pass out into the lungs from the right ventricle, and there are screened out in the lung. I believe the reason we find them localized in the right apex of the lung, and in that particular part supplied by the ramusapical posterior is not because the right bronchus

is larger in size or more direct, and therefore would carry more air and is more likely to carry germs to that side of the lung, but simply because in that particular locality the ventilation of that part of the lung is less perfect than elsewhere, and because of the peculiarities in the circulation in that situation. I believe a great many of these cases of pulmonary tuberculosis are cases of infection by way of the intestinal tract. I believe also, in a case of single lesion in the lung, where it is simply a subepithelial infiltration, as has been described by the essayist, the only physical signs under these circumstances are those described by him. I took that ground in a paper which I read before this Society on practically this same subject in 1900, in which I took as my text the early diagnosis of pulmonary tuberculosis rather than the diagnosis of the incipient stage. The Doctor, having confined his discussion to what he is pleased to call incipient cases, a single lesion, simply a subepithelial infiltration, and without ulcers, cuts us off from any discussion of the symptoms or signs of early pulmonary tuberculosis. But a discussion that would be of far more importance to the general practitioner would be this matter of the early diagnosis, or the diagnosis of the early lesions, if we do not confine it strictly to a single lesion, as the Doctor has under these circumstances.

Dr. Williamson (closing the discussion): In reference to the question asked by Dr. Ryerson as to unpleasant results following the use of tuberculin, I would say that in two or three cases I have seen reactions of a somewhat stormy character following small doses. In one case after the injection of three quarters of a milligram, in a case of suspected tuberculosis of the kidney an exceedingly violent reaction resulted with a rigor, followed by a temperature of over 104 degrees, lasting some twelve or fourteen hours. The symptoms were quite alarming for a few hours, but although the case was kept under observation for a considerable period no other disadvantageous results followed. There was one other case of a somewhat similar nature but with less stormy symptoms, which I have to chronicle.

In regard to Dr. Ryerson's other question as to surgical cases, I feel that I am not competent to answer the question. My practice is limited to internal medicine, and I have absolutely no experience with cases of surgical tuberculosis.

In reply to the question of Dr. Croftan, I have never been able to elicit the symptoms referred to, although all the later cases have been examined with reference to them. Theoretically, it is quite impossible to see how they could be present in such cases.

In regard to the symptoms which have led patients to consult me, very little is to be said. It is well known how very meager are the subjective symptoms in most cases, even where the disease has progressed to such a point that the signs of consolidation are quite plain. I did not wish to discuss this phase of the subject, but I should say that in at least half of the cases the condition was discovered acci-

dently in patients who have consulted me for other troubles. In those cases where the symptoms of the disease were sufficient to lead them to seek advice, slight digestive disturbances, slight cough, loss of weight, etc., are most commonly complained of. Personally I lay but little stress upon the subjective symptoms, except in so far that they render a searching examination of the lungs, imperative. In view of the facts already referred to as to the frequency of overlooked tubercular foci, as shown by autopsy records, it should be made a rule never to be departed from that a rigid examination of the lungs is a *sine qua non* in every medical case, whether presenting suspicious symptoms or not. I feel sure that nearly all our errors are made along the line of considering cases incipient when they are in reality further advanced, that is when the stage of interstitial infiltration has already been reached. This is especially true of foci in the sub-apical region, as will be evident to anyone who has a correct conception of the limitation of physical diagnosis in such cases. Every one with much experience has seen occasionally a case where the most painstaking examination, repeated several times, has revealed no definite physical signs whatever, and yet the sputum shows a few tubercle bacilli. These cases become rare just in proportion to the experience of the examiner and to the thoroughness of the individual examination.

So far as the potassium iodide test is concerned, I have used it in a considerable number of cases with more or less satisfaction, but in others it has failed utterly. Inasmuch as the test presents nothing specific, I have learned to consider it of very subordinate value.

In regard to the question of vascular and lymphatic infections, I believe that the last word has by no means been spoken. Much evidence has lately been brought forward, more especially evidence of an experimental nature, in their favor, although in the investigations of Birch-Hirschfeld, so far as the primary bronchitis tuberculosa is concerned, a lymphatic or vascular origin may be, I think, excluded with certainty. The reasons for the localization of the focus in bronchi of the third to the fifth order, was considered by Birch-Hirschfeld at some length, but its discussion would lead us too far on this occasion.

Dr. Lucy Waite read a paper entitled **the Present Status of Surgical Intervention in Retrodeviation of the Uterus.**

Discussion.

Dr. Henry T. Byford: I was very much interested in this paper, and think I can summarize the whole matter with regard to the present status of operative treatment for retroversion or retrodeviation of the uterus by saying it is all in a condition of confusion. However there are some points which should be brought out and are worth discussing in a paper of this kind, because the final word has not been said by the profession.

I heartily agree with the essayist that it is wholly unnecessary in many cases to operate for retrodeviation of the uterus alone. How-

ever, with regard to the question of whether a retroversion of the uterus will cause any trouble in itself, it is hard to consider a retroversion separate from other conditions. Ordinarily, there must be some relaxation of the broad and utero-sacral ligaments, unless the retroflexion is marked. When there are adhesions or conditions that are connected with the retroversion of the uterus, the question arises how can we be certain to relieve them without paying attention to the retroversion itself. But I suppose that phase of the subject is a little beyond the scope of the discussion, yet it is perhaps the most practical point we can consider.

In many cases we have a deviation of the uterus from the normal that is not serious and does not cause much trouble, and we have operations that are complicated, that produce abnormal conditions, require a great deal of cutting, and also expense to the patient, and they ought not to be done for the mere correction of retroversion. What we want is not more operations, that are so often invented and done for the benefit of the operator rather than for the benefit of the patient, but a simplification of the operations, so that we can apply them to simple conditions.

A large proportion of the cases that come to me have symptoms and they want to be cured. In examining such patients I may find a laceration or other troubles along with adhesions. I may tell a patient that she needs a curettage, a perineorrhaphy, or what not, and that while I am about it I will do whatever is necessary. I do not know whether it would be all right to let the retroversion alone in such cases or not, but I have seen women who were not cured of their symptoms when the retroversion was not relieved. If I have a simple method with which I can correct it, there is no great objection to doing it with the other operations. An Alexander operation involves but little more cutting and no danger.

In the other class of cases in which there are peritoneal adhesions, if I have to operate for them I do not want to let the uterus go back and form new adhesions. So I take a fold in the round ligament, sew it together and draw the parts together in a small little knot and the uterus does not go back. The woman is cured of the retrodeviation with but a trifling addition to the operative procedures and but a few moments of time.

I believe that mere uncomplicated retroversion causes as a rule no symptoms, but I find but a few uncomplicated ones.

Dr. Franklin H. Martin: I would like to ask the essayist one question and have her answer it if she will before I begin my discussion. It is this: In her investigations, did she find any reported cases of pregnancy following the intra-abdominal shortening of the round ligaments besides the one reported by Dr. Anna Braunwarth and the one reported in Brooklyn, in which rupture of the uterus occurred a few years afterward and possibly one other case?

Dr. Waite: I cannot say that I did.

Dr. Martin: (resuming.) This subject is chaotic. It is chaotic because it is discussed

from two standpoints, one from the standpoint of those who operate and who have had their training with American women and the other from the standpoint of those who do not operate and whose training or experience has been mostly with the peasant women of Europe. If there is anything that is true in the world, it is an abnormal development of the sympathetic nervous system in the women of America and possibly those of France, and I wish to take off my hat to my old friend Byron Robinson, for pounding away on this subject until it is simply impossible for us to forget that women have two brains, one here (pointing to the head) and one in the abdomen.

What I have to say is based on the two sides of this subject. I have dealt with the peasant women of Europe, and I have dealt also with the neurotic women of America; therefore I think I am familiar with the two types of women. My experience is not based on operating alone, but on an enormous number of cases treated in the office by what I consider sensible and rational means, namely, postural treatment, hot water douches, stimulation of muscular tone of the parts by some form of interrupted electricity, and attention to the general hygiene of the patient and her mode of living. The cases I have treated by these means will number many hundreds. Those cases I have not tabulated. My other cases are those in which I have found it necessary to operate. Over one hundred cases were operated upon by the old Kelly fixation method before 1896. I reported to the Chicago Gynecological Society two months ago three hundred and twenty-eight cases operated on by my autoplasmic method of suspension since 1896, 98 per cent of which were successful, and the ability of the operation to successfully stand pregnancy is illustrated by the report of six normal pregnancies in this series. I have operated on over 50 cases by the Alexander operation by fixing the ligaments to the pillars of the inguinal canal, as formerly performed prior to 1896. I have tabulated 79 cases operated on by the Alexander operation by the autoplasmic method of tying the ligaments together. So my experience is extensive and broad. Twelve normal and uncomplicated pregnancies and labors followed these Alexander operations, and the symptomatic cures in these seventy-nine cases were complete.

Now, in regard to symptoms, it is simply inconceivable to me how anybody coming from the home of Robinson can say that a retroverted uterus, impacted and remaining in that position for any great length of time, right at the very center of one of the provinces of the abdominal brain, cannot or does not produce symptoms, and not only symptoms but damnable symptoms, because it certainly does.

I am not going into primary principles, but I would like to make one little picture (drawing on the blackboard, representing the normal and the retroverted position of the uterus). The remarks just made by Dr. Byford struck the keynote, when he said that there are few uncomplicated retroversions. There are so few that they can scarcely be considered. Retrover-

sion is a complication at the beginning, and this being so, there is no such thing as an uncomplicated retroversion. As soon as a retroversion of the uterus occurs of any degree, the fundus of the organ passes backwards, and as soon as it does that, the uterus becomes parallel with the vagina. As soon as it does that, it is impossible for retroversion to occur without immediately telescoping the vagina, and lowering itself in the pelvis. It immediately becomes therefore, a complicated retroversion, and just so soon as the cervix, which is supplied not only with sympathetic nerves but with cerebro-spinal sensory nerves, presses low in the vagina, presses upon the cerebro-spinal nerves near its outlet, at that point (indicating) we get what the woman calls a bearing down, which represents one of the most aggravating symptoms of retroversion and its complications. This bearing down pain is usually one of the first symptoms complained of. The next symptom is that produced by the pressure of the fundus of the uterus upon the back of the pelvis. While the pressure of the fundus upon the back of the pelvis does not always produce severe pain, as a rule it does. Thus we have the local symptoms of backache, bearing down pain, dysuria from bladder symptoms and constipation from bowel pressure. The result of the irritation of the displaced uterus upon the abdominal brain gives us the distressing relay of symptoms often quoted by Byron Robinson.

In regard to the treatment, some of these cases must be treated by other measures than by postural treatment, electricity, hot water, etc. The cases which must be treated that way are those in which the uterus is perfectly movable, but still persists in remaining in abnormal position. If this local treatment fails they must be treated by the Alexander operation preferably. At the same time, repair the perineum which probably exaggerates the retroversion and repair the cervix which keeps the uterus large. If the woman has been infected and she has retroversion, and her pelvis is full of septic material and adhesions exist in consequence, then the only thing to do is to open the abdomen, clean out the septic material, save just as much of the live tissue as can be saved and then, if the uterus is not covered on its fundus with plastic exudate—is not raw, as you would say—it should be suspended by either the superficial operation of Kelly, which has been developed since 1896, after the statistics of Dorland quoted tonight by the essayist, were published—or better, the operation which I think is preferable, namely, my own operation of suspending the uterus on a strip of peritoneum. These two operations are the operations of choice; they are simple, and they accomplish excellent results. They cure the patients.

Time does not permit me to pay my compliments to the operation of intra-abdominal shortening of the round ligaments. For the last three months I have gathered together every case of pregnancy that is reported in literature following operation for retrodeviation of the uterus, and I have found less than ten cases of pregnancy reported following these operations.

Where are the reports from the men—Webster, Wylie, Baldy and the rest—who have been fathering these operations for several years? Where are the reported cases?

The essayist of the evening favors these operations. Why? Certainly not because there is anything favorable in literature showing their results. Why did she quote Dorland's obsolete reports of pregnancies following fixations to prove the dangers of the modern operation of suspension of the uterus?

To summarize then, the present status of operations for retrodeviations of the uterus I will submit the following: Retroversions of the uterus are nearly all complicated and produce symptoms. Retrodeviations should be treated (a) by local treatments when not seemingly complicated, (b) by Alexander Operations when persistent and free from adhesions, and (c) by a superficial suspension when complicated by conditions requiring the opening of the peritoneum.

Dr. Emil Ries was asked to participate in the discussion. He said: I came to the meeting to-night to listen, not to talk, but I think I should be ungrateful did I not express my feelings toward the essayist. She certainly gave a very complete review of the subject, and has grasped the trend of modern thought. She fights in the forefront, and as we know what a woman's influence is on other women, especially in medical life, I hope and pray that her influence may grow and increase as it has done in the past.

Some of the remarks made by Dr. Martin are of interest to me, because I have been experimenting with these cases in a special way. It has been said to-night that retrodeviation of the uterus in the sensitive American woman must of necessity produce symptoms distinct and apart from those which may be produced in European peasant women. The gentleman who made that statement probably overlooked the fact that there are women in Europe who are not peasants; that women in Europe have retroversion who are above the peasant class, and that there are authors who have experience with these cases, men who have practiced outside of the peasantry. However, it is not necessary to confine one's practice to any particular class, because it is simply a matter of experiment. I am rather astonished to notice that the experiment has not been made more frequently. Whenever I have a chance at my clinic I demonstrate to the students the effect of a change of position of the uterus as it is produced by a pessary, as it is produced by simply a replacement of the uterus, and point out how the change of position may influence the symptoms. I need not give the details. We have had six cases in which we have experimented something like this: A woman is examined, and retroversion of the uterus is found. A pessary is placed in the vagina; the uterus left in retroversion; the woman told nothing about what is done, but instructed to come back in three days. She comes back with symptoms the same as they were before. Then the uterus is placed in

anteversion; no pessary put in; the woman told to go home and return at the end of three days. She comes back and we find the uterus in retroversion again. It must have fallen back sometime. The uterus is replaced, a pessary introduced into the vagina, which holds the uterus in position; she goes home, returns in three days and still no change in the symptoms. Now, in the six cases with which we have experimented in this way, there was absolutely no change, and what is more, the women did not know whether their uteri were in anteversion or retroversion; whether a pessary was placed in for appearance sake or to hold the uterus in position. These women did not know when the uterus had fallen back, and their symptoms were entirely uninfluenced by the position of the uterus. I have taken pains to have the findings verified by men independently of my own work, who did not know what I had intended to do. One of these friends was Dr. Beverly Campbell, now of St. Joseph, but formerly of Chicago, who examined one of the cases for me. I have had students examine cases without telling them what I had done, and they verified the findings. Even women who know about retroversion do not know whether their uterus is in anteversion or retroversion. Of all the cases of retroversion I have seen in my professional life (and I have been practicing gynecology for something like sixteen or seventeen years), I recall only one woman who could tell me when her uterus became retroverted, and on examining whom I found that she was right, but this case had adhesions. It was not an uncomplicated case. I have never seen an uncomplicated case where the woman knew whether her uterus was in anteversion or retroversion.

So far as pressure symptoms are concerned, I do not think even Dr. Byron Robinson would place a woman's brain so low as over the sacrum. The abdominal brain is in the abdomen, not over the sacrum, where Dr. Martin expects the fundus to be pressing.

So far as the operations are concerned for retroversion, I never operate for retroversion of the uterus *per se*. An uncomplicated retroversion without adhesions is not an indication for operation or treatment. Retroversion of the uterus at present is sharing the fate of the cystic ovary, the lacerated cervix, the slightly lacerated perineum, also the floating kidney, varicocele, and similar conditions which are a fruitful field for the improvement of the finances of the surgeon, and much less fruitful for the benefit of the patient.

Dr. Waite (closing the discussion): I wish to thank the gentlemen for discussing my paper. I fear that, in order to answer all of the remarks made by Dr. Martin, it would be necessary to re-read my paper, and I do not feel at liberty to take the time. I would however like to remind him that Dr. Byron Robinson's investigations have revealed the fact that men also have two brains.

Dr. Martin says that his operation is simple, but he also says that it requires opening the abdomen. I do not think that we can con-

sider any operation which requires opening of the abdomen a simple operation.

Dr. Walter M. Fitch read a paper entitled

The Nerve Hygiene of School Children.

There is no problem before the medical profession today more important and more urgently demanding solution than the problem of nervous exhaustion in its various phases. Not only is simple neurasthenia increasing rapidly, but insanity in its various forms is becoming alarmingly prevalent.

This condition is, I think, rightly attributed to the exhaustive character of our modern industrial life; and this includes not only industrial life itself, but also the necessary educational preparation for it. In this brief paper, I discuss certain phases of the educational problem as related to the healthy development of the nervous system.

The problem of child education today is very different from the problem of yesterday. The tasks demanded of the growing child now are infinitely more complex and more difficult than were those offered to the child of fifty years ago. His education is as different as the environment in which he grows.

This is rightly and inevitably so. We live industrially in the age of the young man. The man who does not win success while young will never win it. This is realized alike by thoughtful parents and educators. It is not from choice that teachers force their pupils; it is from dire necessity.

It is manifest that both the industrial conditions of today and the educational preparation of the child to meet these conditions impose upon the organism, and especially upon its nervous elements, a tremendous and exhausting strain. Whether or no the organism can sustain this strain is not yet determined. The results of nerve strain may not be shown for many years, perhaps they may only become manifest in the next generation; but it is for the thoughtful students of today to anticipate these possible consequences, and, by a careful study of the problem today by physician teacher and neurologist, to protect the future.

Briefly stated the problem is this; given a child of normal average bodily and nervous organization; subject that child through the age of development and tissue growth to a continuous nerve strain; bring that child through at the end of this period in a condition of normal vigor and robustness, both of nerve and body. It can be answered intelligently only by combined efforts of parent, teacher, family physician, and neurologist. I personally approach the problem both as physician and parent.

Physiologists tell us that the nerve elements, the neurones, are all formed in their simplest form by the end of the third month of intra-uterine life; that there is subsequently, no new formation of nerve elements, but that the various neurones grow in size and their processes

form new connections, both with the tissues and with other neurones; and that the period of rapid neurone growth lasts only until about the eighth year, at which time the central nervous system has attained nearly the size of the adult life.

As the nervous tissues are stimulated the neurones grow, provided the necessary conditions both of stimulation and of nutrition are complied with. These conditions are, first, that the stimulation be of normal character, and that it shall not be carried to the point of exhaustion. By normal stimulation is meant the stimulation of nervous action both direct and reflex, and of conscious effort physical and intellectual. By abnormal stimulation, on the contrary, is meant chiefly the stimulation of drugs or of diseased conditions. Tea, coffee, alcohol, and tobacco, all stimulate the nervous tissues, but such stimulation is abnormal and does not induce development of the neurones, but the contrary. So also excessive stimulation or irritation of the nerve elements produces exhaustion and diminished development of the nerves, rather than an increased growth.

The other condition of neurone growth is that the neurone, in every portion, is bathed in pure and healthy blood—in blood rich in nutriment and oxygen and normally free from excrementitious substances.

The neurone alternately is in a condition of activity or rest. During activity, the stored up nutriment of the neurone—the potent chemical substances for which our colleague, Dr. Sanger Brown, has suggested the name "neurenergen,"—during activity this substance is being consumed by the activity of the neurone. The ash, the waste remnant of this consumed neurenergen, is being eliminated from the nerve and carried away by the blood stream. Also, probably, the neurone is taking from the blood stream certain nutritious substances and transforming them into neurenergen. But during activity of the neurone, the neurenergen is not formed so fast as it is consumed, and the waste materials are formed faster than they are removed from the neurone, which, in consequence, becomes loaded with this excrementitious substance. During the period of rest, however, the waste material is rapidly removed from the neurone, which is also storing up a full supply of nutriment.

The essential condition of growth is the proper alternation of periods of activity and of rest. A neurone will not grow if it is not stimulated to activity. Rest alone produces stagnation not development; but excessive activity or deficient rest will produce a wasting of the neurone even to the point of structural atrophy.

If, however, the periods of rest and activity are properly balanced, the neurone grows; and, as it grows, it increases its power of work and also its power of endurance. It is assumed, of course, in these remarks, up to this point, that the blood is normal.

Normally, the growth of neurones is most active and vigorous in early life, becoming gradually less and less active after birth, and

ending largely at the age of about eight years; at which time the brain has attained to nearly the bulk of adult life; but neurone growth continues with very much diminishing activity until about 30 years of age, after which it may be looked upon as abnormal. It is believed that the acquisition of new powers or faculties of the mind imply the growth of special neurone elements in the brain and nerves. If this be true, it would account for the difficulty of teaching late learners. A child, even of utterly illiterate parents, learns the alphabet and easy reading without difficulty, while the adult illiterate finds the mastery of the alphabet an almost impossible task. The child who has learned young; in whose nervous system the facultative neurones have been stimulated to development by use, during the time when growth is most easily induced; such a child should have through his life a mind and a brain better equipped for intellectual work, than a child whose intellectual development has begun after the period of rapid neurone growth has ended.

But what has been said applies only to absolutely normal growth, to growth induced by normal stimulation which shall never be carried to the point of exhaustion, which is followed by rest absolutely normal and where the neurones are bathed in healthy blood. Better, is intellectual stagnation in early years than nerve exhaustion.

By nerve exhaustion is meant such excessive stimulation of the nerve elements, that the periods of rest are insufficient for complete recuperation. It may be produced by either too prolonged nerve stimulation, as for instance in school hours of too great length, or of individual lessons of too great length; or it may be from the intellectual tasks being in themselves too difficult. The latter is not usually the condition in my opinion.

Our principals and primary teachers are thoroughly intelligent as a rule, and they very seldom, in my judgment, try to force tasks upon a child which are beyond that child's capacity. It may perhaps be done at times, but I can honestly say that I have personally never yet met with a case. Teachers do not promote pupils from one class or grade to a higher one, in which the requirements are more difficult, until the pupil has attained such mastery of the work in hand, that the advanced work is easily within his capacity.

The other condition, viz.: too great length of individual lessons and of school hours as a whole, still does prevail to some extent, to a much greater extent indeed than it should. This is partly the fault of the teachers, but is chiefly the fault of unenlightened public opinion, and consequent opposition more or less active to the necessary pedagogic reforms which must be instituted in order to overcome this really important condition. In a city school, the child must be kept in bounds and active during a prescribed number of hours. But in a two or three hour session, the task of conducting a large number of young pupils of differing grades of development through a series

of short lessons of ten or fifteen minutes; the series being so arranged that each task required is different from, and a rest from the one which precedes and follows it; such a task is not merely difficult but impossible in the schools of the size and equipment which we now possess.

Nevertheless the teachers of our primary grades are, I think fully alive to this as an ideal condition and, in working toward these reforms, ask only to be supported by an enlightened public opinion, such as may readily be developed by the medical profession.

The reforms needed are:

- 1st. Smaller classes in primary grades.
- 2nd. More time and better equipment for physical culture.
- 3rd. More time and better equipment for simple manual training work.

One other cause of nerve exhaustion in childhood requires separate and special mention. This is the extra out of school work put upon the child by unwise parents. I refer especially to music study. This problem is a serious one. The study of music is sufficiently like ordinary school work so that it is not in any sense a rest by change of occupation. At the same time it is so unlike school work that, for the full development of the musical faculties, early training is necessary. If this be given, the nerve elements necessary to musical technical power will be so started in their development that musical proficiency will be readily acquired in later life.

Unfortunately for the child, the task of music—study is too often imposed upon a nervous system already taxed to the limit of safety by its prescribed school routine. This of course should be avoided, not in my judgment by stopping the music during this early period, but rather by going slow, both with the music and the school studies. After the musical faculties have been once awakened by this period of early training, the music should be kept always subordinate to the school work, unless parents prefer to have the pupils held back in their studies, as for instance where music is to be followed as a vocation. In few cases is the child able to do full work as a music student and a school pupil without overtaxing the growing nervous system to the danger point.

Closely related to nerve exhaustion from excessive normal stimulation is exhaustion from irritation. By this is meant a continuous impression upon the afferent nerve arising from some abnormal bodily condition, transmitted by this nerve to the central neurones, and diffusing among them an impression of instability more or less marked. This afferent impression is not harmful because of its intensity but because of its persistency. The fact of the diffusion of slight afferent impressions is sufficient often to prevent the complete inactivity of the neurones necessary to perfect rest. The child is "nervous," we say. We mean by nervousness that the central neurones are in a condition of chronic irritation, or abnormal

stimulation. This may arise from the presence in the blood of substances toxic in their nature, and such conditions will be again referred to. At this point, however, I wish to speak only of the condition of nervous instability due to irritation of peripheral nerves, and of these we must here consider three classes, viz.: eye strain, phymosis, and the ovarian irritation of puberty.

In no condition of health derangement is the practice of the average physician open to more just and severe criticism than in the management of a case of nervous irritation. The irritation from phymosis is generally appreciated and treated properly, either by retraction or by circumcision. The contrary is true of eye-strain. Very few physicians in general practice keep this condition in mind: still fewer make the exceedingly simple tests necessary for the diagnosis of the condition. Of course the proper correction of refractive errors is distinctly specialists work, and should not be undertaken by the general practitioner. But no man should undertake general practice without knowing the simple tests for refractive error, and having ready at hand the very simple apparatus necessary to make these tests.

In practice we find that, of the various ocular errors producing nervous disorder, myopia or short-sightedness is least important. A child may be very short-sighted and have no nervous symptoms whatever; moreover the patient is usually aware of the condition, and it is the one most easily detected by superficial test and most likely to be corrected. The contrary is the case usually with either of the other three common conditions.

Hypermetropia, astigmatism or muscular error as a rule produce nervous irritation without any ocular symptoms of which the patient is conscious, and the conditions are revealed only by intelligent examination. This can be made in from three to five minutes, with but a small margin of error.

The nerve irritation of puberty in girls is usually rather slight; it is however exceedingly common—indeed it is the rule rather than the exception. If we have it occur in a girl whose nervous system is in a condition of instability from irritation by any other cause, it may become a matter of very grave importance, and if neglected may lead to a condition of severe and prolonged invalidism.

At the same time I wish to state that in my own experience as general practitioner, and in my father's experience also covering more than half a century of active general practice, we are ready to assert that treatment of these cases of pelvic irritation in girls at puberty very seldom requires any treatment directed especially to the pelvic condition; that especially if the treatment is local these cases are usually made worse rather than better; and that, if other causes of nerve irritation are removed, the patient is relieved and cured, passing the critical period without difficulty.

There is, however, one special hygienic precaution which should be taken with a certain

per centage of girls at this period of life, viz.: the general nerve strain should be relaxed. The nerve work should be cut down, during this period of physiological irritation, far below the average normal of work of the nerves either before or after this period. This I know is often difficult to do. Girls of this age are apt to be both excessively proud and sensitive. The thought of dropping back a year and allowing her companions to advance beyond her, seems to the bright and sensitive girl a dilemma little short of tragic. Nevertheless it may be necessary, and should be always insisted upon where it is clearly best. But the physician who would keep a girl back without good cause is guilty of very grave malpractice. Yet girls are constantly taken from school on this account, who would be perfectly able to go on with their work if the eye strain were removed, or if the respiration were developed up to the normal. The gravity of this error may be realized when we think how many girls, after dropping back a year, refuse to re-enter the schools and so end their pupilage prematurely.

One thing should be insisted upon rigidly by the family physician at this period. This is that there shall be no assumption of social duties and no dissipations. Parties, dances, and evening theatres must be forbidden; early hours insisted upon, and music study should usually be discontinued for the time, permitting only a few minutes practice daily. With such a regimen most girls will pass this period of storm and stress in perfect safety.

We pass now to the consideration of the other class of causes for nerve derangement, viz.: abnormal blood conditions. In this connection, however, I propose to exclude the anaemias as being a subject too broad for inclusion in this paper.

We have already stated that the second condition of neurone growth (stimulation being the first condition) is nutrition. That is that the neurone be bathed in every part in pure and healthy blood, in blood rich in oxygen and nutriment and normally free from excrementitious matter.

A neurone which does not receive its normal supply of pure, healthy blood cannot functionate or grow to the best advantage. Its growth will be retarded; its reaction either irritable and feeble, or sluggish and imperfect. A child whose nerves are in this condition may manifest the trouble by general irritability and nervousness, or by a heavy sluggishness. In either case the rule is that the nerves fatigue easily.

The chief blood derangement is sub-oxidation. This is due to one or both of two causes, viz.: obstruction of the air passages and weakness of the respiratory muscles. We usually find both present, and where present we have the most profound interference with the work of the nervous system. Feeble respiration means sub-normal oxygenation of the blood. This means that the neurones are deprived of their normal chemical stimulant (oxygen), and also are depressed by the presence in the blood of the toxic chemical products of sub-oxidation.

This interferes most profoundly with the ability of the child to meet the requirements of his school. While a child with eye-strain is typically nervous and irritable, a child with sub-oxidation is typically stupid. His mind is in a dazed condition. Simple problems in mathematics, are beyond his comprehension; while, as for memorizing, as we say, "things go in at one ear and out of the other." Such pupils are the bane of the teacher's existence; and when, as often happens, we have a combination of the nerve irritation of eye strain with its lack of power for clear visualization, together with what we might call the chemical incapacity of the brain from sub-oxidation, we have a pedagogic problem which may well be called impossible.

Now this is the fault of the general practitioner of medicine, the family physician. Nothing is easier in most cases than the removal of the obstructions to respiration in the nose and throat. The general practitioner should do this himself. When a case presents any difficulties, there is even then no excuse for neglecting it in the presence of all the facilities of our city in specialists and clinics. But this must be followed by some intelligent gymnastic treatment which will strengthen the muscles of habitual respiration. It cannot be stated too emphatically that, in nearly all cases, stupidity in a child is due to, and is a symptom of physical disease, which is curable and should be cured.

Case Jan. 18th. Girl of 16 years. Well developed and womanly. Height, 5 ft. 4 in. Weight, 98 lbs. Puberty, 2 years ago; menses normal. In 6th grade, i. e. two years behind her age, impossible to learn, seems dazed, and can hardly remember lessons from one day to another, is faithful and tries to learn but cannot. Examination shows eyes normal. Adenoid obstruction in naso-pharynx. Respiratory movement in normal respiration, axillary circumference $\frac{1}{8}$ inch, nipple circumference $\frac{1}{8}$ inch, ensiform circumference $\frac{1}{4}$ inch.

Treatment: removal of the adenoids, followed by prescribed gymnastic treatment given in our office by our own nurses.

March 10.—Completed course of 25 treatments, measures respectively of normal respiratory movements, 1 inch, $\frac{7}{8}$ inch, $\frac{3}{4}$ inch.

July 13.—Has had no further treatment, measurements respectively increased by normal development to $1\frac{1}{4}$ inches, 1 inch, $1\frac{1}{4}$ inches. Has become one of the brightest pupils of her class, learning all her lessons without the least difficulty.

This case is perfectly typical of what can be done and should be done by the family physician to supplement the work of the teacher.

The importance of this subject is not confined to the school child. Conditions of hygiene and nutrition of the growing neurones determine the state of nerve development, the normality or abnormality of the nervous system

throughout life. We are today brought face to face with a problem, medical and sociological of the most stupendous importance. Compelled on the one hand by economic conditions which we cannot alter to force the education of the growing child to the danger point, we are confronted on the other hand by the fact of the enormous increase of neurasthenia and of insanity, so common that we can scarcely build asylums fast enough. It then becomes the duty of the physician to study this subject faithfully, and to co-operate intelligently with both teacher and parent in guarding the nervous system of the growing child.

Discussion.

Dr. L. Harrison Mettler: The essayist has taken up a line of thought which leads us into medicine, physiology, philosophy and pedagogy. It is impossible to consider all of the suggestions brought out in regard to nervous children and the causes of nervousness in the developing child. But he has referred to one thing that I wish to emphasize in regard to nervous exhaustion and its causation. In the child, I am sure that neurasthenia or nervous exhaustion is not so often an acquired condition as it is supposed to be. More frequently it is a prenatal defect. The neurasthenic symptoms are not the result, as is too often thought, of strain and pushing and over work as they are the expression of an undeveloped child. In other words, these children fall under the head of what is spoken of sometimes in the textbooks as congenital neurasthenia. There is strictly speaking, no such thing as congenital neurasthenia. It is a pure defect, and belongs to those developmental defects, prenatal, or from any other cause, hereditary, neuropathic, with a lot of other forms of natural incapacity. The difficulty in handling these so called congenital neurasthenics, both in children and in adults, is that we are trying to mould and build up something which nature has not given us to build up with. They are hereditary defectives. Some of the cases the essayist has referred to in my own judgment are expressions in the schoolroom of children that are not capable, through their inheritance, or from natural strength, of coming up to the standard of what we consider normal children; and it is no use to apply to pedagogy or to medicine to improve the condition. What should be done is this: We should change the school system. We pride ourselves in America upon the universal equality of our school system. If we stop to think for a moment, there is no more unequal system in anything or in any walk of life than our much privileged and boasted equal school system. We have a severe, uniform grind placed over a whole lot of dissimilar children. What, therefore, could be more unequal? A child born of weak parents, with a naturally unstable system, with a bad heredity behind it, is put into the same room with forty or fifty other children, and is given the same tasks and same hours as the children born of healthy parentage, strong and vigorous. One child breaks down in a short time, while another child goes on with its studies without any impairment of health. A number of these children are congenital neu-

rasthenics, so called; they are mentally weak, even imbecile. They may reveal signs of dementia precox, or even develop later on insanity or epilepsy; they are phrenasthenics; they are along the line of the weak mentally and intellectually. This leaves us then one class to discuss, the normal child. The healthy, normal child as a child may become neurasthenic. In other words, neurasthenia in the child and adult is something that has been brought about; the normal level has dropped down. Can we shift it back again? If we can get these cases out of the condition of neurasthenia, there ought not to be so much dissatisfaction in regard to the use of the term and what it stands for.

Nervous strain and infectious diseases have a good deal to do with this condition. I do not think the reflexes play such an important role. I know that phimosis and eye-strain play a part in those with congenital defects and weaknesses. The great cause of neurasthenia, both in the developing child and the adult, but especially in the child, is not so much overwork as too early beginning of work and monotony. I am convinced, from my own observations, that these are the two prime factors. The real education of the child should be left largely until it is eight or nine or ten years of age. The child will make up for this delay. Let the neurons get their full growth. We would not think of running a machine before all the screws and wheels were fixed, and the connecting links in position. But that is what we do with the nervous systems of our children when we put them to work at regular tasks at early ages. We should not let their tasks become too monotonous. The constant drop of water wears the stone away. In their early years, while the fundamental parts of their nervous systems are still growing, our children should not be kept too constantly to one set of tasks, mental or physical. Variety and play should be the chief thing aimed at in the education of the child; instruction and knowledge should be instilled under the guise of entertainment; and frequent changes of mental and physical activity should be the rule. In this way the rapid changes incident to anatomico-physiological development are met by proper pedagogy and the greatest of all the causes of nervous breakdown, namely, monotony, is avoided.

Dr. C. J. Lewis: I heartily commend the essayist for his excellent statement of a subject that is not usually discussed. Still, there is another interpretation of nerve strain in the young besides those given by the essayist.

That the child age is an impulsive one is too commonly overlooked. Impulsiveness in the child is probably due to the undeveloped state of its cerebral cells. In school, an attempt is made to get the child's brain to function as calmly as it does in adults. In the child, the sense impressions that pass into the brain pass out almost immediately into action. It is because the children have not attained the stability which is so essential for memory—conservatism—that parents, teachers or guardians urge the young to become stayed and sedate. Nerve strain then is the effort made by the

child to change from a life of impulse to a life of continuous thinking.

If I understood the Doctor aright, he spoke of the "faculties" of the mind. Perhaps it is not an easy thing for one to arrive at the conclusion that the mind which is produced by the brain can have faculties. Our intelligence might be looked upon as a product of brain action upon sense stimuli. To denominate such actions as faculties would perhaps be outside the pale of physiology.

Dr. Fitch (closing the discussion): I purposely had in mind in writing this paper not only the conditions of strain, but of nerve nutrition developed by our educational system upon the brain of the normal child. I did not have in mind hereditary neurasthenia. I purposely left that phase of the subject out of consideration.

In reply to the remarks of Dr. Lewis, I was not aware that I used the expression "faculties of the mind." I thought I used the term facultative neurones, or the neurones employed in mental action.

The subject, as I have considered it, had to do with the nutrition, or the nutrition and use of the brain cells or neurones.

CHICAGO SURGICAL SOCIETY

March meeting, 1904, with Dr. M. L. Harris, in the Chair.

Osteomalacia.

Dr. Thomas A. Davis read a paper on this subject, and reported a case. The author believes that this was the first case that has been demonstrated in North America in a male, with apparent arrest of the disease, reported one and one-half years after operation. The patient was a Norwegian, aged 33. The family history, previous history, present illness, exploration of fracture, pathological fracture, diagnosis, differential diagnosis, etc., were gone into extensively by the essayist, also the treatment, subsequent history and skiagrams of the case were exhibited.

Retrospectively, taking the symptomatology as completely evolved in this case, the author said the simplicity of diagnosis was quite apparent. With but a slight knowledge of the disease, the inference could scarcely be incorrect. But taken at such a time as that previous to operation, the diagnosis was not so easy. These were the objective symptoms: Shortening of stature, curvature of the spine, barrel-shaped chest, none of which had been noticed by the patient. The subjective symptoms were rheumatoid pains in the extremities and spine, with possible mental manifestations of stupidity, and a mild degree of melancholia and myasthenia. As to the objective symptoms, one commonly meets with them among laboring people, without attempting to determine the cause as to rickets or occupation, etc. There was nothing characteristic about the pains complained of, and it is yet questionable as to the mental disturbance. It is quite clear that there is no individual pathognomonic symptom of osteomalacia, and still authors have expressed as-

tonishment at the late date of recognition, or complete failure to diagnose the disease. At the present time, with no knowledge of the cause of the disease, its real nature cannot be recognized until advanced bone changes have taken place.

In reviewing the history of a large number of cases, the author finds that the symptoms almost universally mentioned are rheumatoid pains in the extremities and spine, without swelling, accompanied by myasthenia, these symptoms preceding for some months deformity and fracture. With the history of such symptoms, the X-Ray should show the lessened density of the bones, and serve to establish a diagnosis.

Dr. D. J. Davis presented an extensive pathological report of the case. He gave a brief resume of the theories advanced to explain osteomalacia, none of which he said is satisfactory. It is quite likely that softening of bones is produced in a variety of ways, and that different forms probably require entirely different explanations.

Extirpation of Suppurating Kidney.

Dr. Frederic A. Besley read a paper on this subject, and presented a case. Ether was the anesthetic used, and the organ was removed through a lumbar incision. The patient made a perfect recovery. He said a retrospective view of the case presented one important question, namely: Was the removal of the kidney the wisest procedure, or would it have been better surgery to have made an effort to restore the patency of the ureter and preserve the organ? In this particular case he did not think he was justified in jeopardizing the patient's life by exposing him to a prolonged operation and a prolonged convalescence.

Dr. Bayard Holmes reported a case of buried, vertical, erect, retrocecal appendix. During the past summer he operated upon a patient, twenty-six years of age, in whom he found one of the rarer traces of the excursions of the cecum, and one of the more difficult positions from which the appendix must be removed. The patient had suffered two attacks of inflammation of the bowels, one of which kept him in bed for two weeks. He had been at work for a couple of months, and as a part of his preparation for surgical drawing, the patient attended all of the speaker's operations at the hospital. One night an emergency operation for a periappendicular peritonitis was performed in his presence. He was very much impressed by the history of the case, and the dangerous condition in which the abdomen was found. On the following day he insisted upon the removal of his own appendix. The ordinary examinations were made, and everything found perfectly normal except moderate leucocytosis. After the routine preparation, the patient was anesthetized with chloroform, and the cecum approached by a vertical incision on the outer border of the right rectus, an inch and a half long. There was no evidence of the old inflammation about the cecum; the cecum itself was short, reaching only a trifle below the ileo-cecal

valve; the meso-colon was indistinguishable, if not absent. The meso-colon of the ascending colon was broad; that is to say, the colon from the cecum cephalad was sessile. The ileocecal spaces were empty and contained no appendix, but immediately behind the cecum, and ascending cephalad behind the ascending colon, and wholly covered by the two layers of the meso-colon, was a firm, hard, finger-shaped mass reaching cephalad to the kidney. This was carefully dissected out and proved to be the appendix. It was thick, inflamed, and wholly destitute of a peritoneal covering except at its juncture with the upturned cecum. The cavity from which it was removed was packed with iodoform gauze, which hung out of a small incision. This gauze was removed on the third day, and the patient left the hospital one week after the operation. In his opinion this was a case in which the belated appendix had been caught behind in the retrocolic space, and buried by the adhesions which occurred in early fetal life between the kidney, the abdominal wall, the colon, and the upturned appendix and cecum.

Dr. Holmes also reported a case of partial appendicitis, and discussed at length the ambulatory treatment after appendectomy. He stated that his patients are as thoroughly prepared and as carefully examined for complicating conditions as the exigencies of the case permit. Most patients stay in the hospital twenty-four or forty-eight hours after the diagnosis has been made, and operation determined upon, but acute cases are operated upon at once. The patient is given full diet up to the noon preceding the operation. A vigorous cathartic is given the night before the operation, and the patient is put upon a liquid diet. The abdominal wall is shaved and a soap dressing applied, which remains on all night. On the morning of the operation, and at least four hours preceding it, the colon is thoroughly flushed out; the patient takes no food or drink during this time, and is kept in bed, and no disturbance from visiting friends is allowed. The day following the operation the patient sits up and even walks around, and after this time has the freedom of the hospital until the stitches are removed on the third or fourth day. The patient usually dresses and walks outside the hospital on the fourth day, and occasionally goes home before the end of a week. Very few cases of uncomplicated appendectomy have remained longer than one week after the operation.

He gave brief histories to illustrate the course of a few of his patients.

He also reported two deaths after appendectomy, in one of which the autopsy revealed acute yellow atrophy of the liver.

Severe Laceration of the Abdominal Muscles.

Dr. Daniel N. Eisendrath reported this case, and exhibited the patient. Patient sustained an injury to the abdominal muscles and was seen two hours after admission to the hospital by the speaker. Over the crest of the ilium a tumor about the size of two fists was found, which was tympanitic on percussion, and which

could be replaced. After a more careful examination, a diagnosis of traumatic hernia through the triangle of Petit was made. Other injuries were fractures of the fifth and sixth ribs, with pneumothorax, and dislocation at the outer end of the clavicle. Patient did not give consent to operation shortly after the injury, but did so the next morning. A large incision was made, which extended almost from the anterior superior spine of the ilium down to the middle of Poupart's ligament. Much to the speaker's surprise, upon cutting through the skin he immediately entered the peritoneal cavity, and found very extensive laceration of the abdominal muscles. The skin itself was not contused or abraded. The injury extended so as to involve all the abdominal muscles, the external oblique, the internal oblique, the transversalis fascia and peritoneum, all being torn from the erector spinae muscle down to the internal abdominal ring. There were large pieces of omentum lying in the wound, with extensive contusion of the ascending colon and cecum. He could not suture peritoneum to peritoneum because he could not find where it was in the iliac fossa. At first, he thought of drilling holes through the ilium and bringing sutures through the perforations, but as this would take too long he adopted the plan of using the mattress suture, such as is used by Dr. E. Wyllis Andrews, in the ordinary treatment of a case of inguinal hernia. He went through the gluteal fascia, and then with a mattress suture of kangaroo tendon sutured the muscles and brought them out again through the gluteal fascia, after which they were tied. He brought all of the muscles beyond the crest of the ilium. He used altogether fourteen sutures. The result in this case was excellent. The patient claimed never to have had an inguinal hernia before sustaining this crushing injury, but after the injury a left-sided inguinal hernia made its appearance, which was of considerable size.

Congenital and Infantile Omentocoele on Same Side, Separated From Greater Omentum and Peritoneal Cavity.

Dr. Jacob Frank and Dr. Wm. T. Eckley presented a joint paper on this subject. In 1901, when operating on a case of left inguinal hernia, an anatomical diagnosis of fatty hernia was made. Unfortunately, a complete history of the case was lost, but the few points of interest in connection with it are these: A swelling in the left inguinal region was first noticed when the patient was three years of age. At the time of the operation he was fifty-four years old. It had grown gradually for about thirty-five years, when it attained the size of an adult head, and remained about that dimension up to the time he consulted Dr. Frank. Occasionally he had symptoms of strangulation which disappeared in a short time. At intervals he had worn a truss, but for many years had not used one. The swelling in this case was diagnosed by many surgeons in America and abroad as hernia, and an operation for the radical cure recommended, but owing to the total absence of any untoward symptoms at the time an operation was advised, but consent was

not given. When the patient was seen for the first time, in May, 1901, the mass was irreducible. There were symptoms of strangulation present, such as pain, tenderness, vomiting, and inability to have a bowel movement. These were relieved with little difficulty by elevating the hips and applying ice-bags to the swelling. The operation was performed several months later, under local cocaine anesthesia, owing to a valvular lesion of the heart and an atheromatous condition of the arteries. Dr. Frank described a few points connected with the operation.

The anatomical features of the case were discussed by Dr. Eckley.

THE PHYSICIANS' CLUB OF CHICAGO.

The regular meeting of the club was held in the banquet hall of the Auditorium Hotel, on Tuesday evening, April 15, 1904. The occasion was a Ladies' Night and the object, namely, to achieve a social success, was fully attained. The reception was held in the hotel parlors on the second floor for about an hour before dinner was served. Each member of the Reception committee wore a white rose and each other member and guest was provided with a red one. The Reception committee consisted of Doctors and Mesdames: Arthur M. Corwin, Charles P. Small, Henry F. Lewis, Robert H. Babcock, Charles S. Bacon, Daniel R. Brower, David W. Graham, E. Fletcher Ingals, G. Frank Lydston, L. Harrison Mettler, Charles E. Paddock, Rudolph Wieser Holmes, Henry Parker Newman, John E. Owens, Emil Ries, James E. Stubbs, Thomas J. Watkins, George W. Webster, John Ridlon, and Doctors: James H. Stowell and Arthur R. Reynolds.

The club's guests of honor were: Mr. and Mrs. Albion W. Small, Mr. and Mrs. Charles Henrotin, Mr. and Mrs. Edgar A. Bancroft, Rev. Frank DuMoulin, Mr. William Buford Carlile, Dr. and Mrs. Charles E. Banks.

The members and their guests discussed a well prepared menu, during which time a quartette of Tomaso's Mandolin Orchestra played in the gallery. Prof. Albion W. Small, of the University of Chicago, the chairman of the evening, introduced, in a happy speech and in a witty vein, the subject, "As Others See Us." Mrs. Charles Henrotin, the president of the Chicago Women's club, was the first speaker. She spoke well and earnestly upon the physician and the medical profession from the viewpoint of the woman and the mother. Mr. Edgar A. Bancroft, the distinguished and eloquent attorney, indulged in some pleasantries at the expense of the doctors which were received with good grace by the company. Rev. Frank DuMoulin, Rector of St. Peter's church, in an excellent speech, told how the clergy look upon the medical profession. Dr. Charles E. Banks, Superintendent of the Chicago Marine Hospital,

made answer to the former speakers on behalf of the medical profession in a facetious style which pleased everybody by its quiet humor.

Altogether the occasion was one which might well give pride to the directors and members of the club. The attendance was the largest ever recorded at any meeting of the Physicians' club. One hundred and twenty-eight sat at the tables and about ten or twelve more came in later in the evening to listen to the speeches. This meeting surpassed even the former record breaker, the meeting of November 2, 1903, when one hundred and seven partook of the banquet. The membership of the club is now full to its limit of two hundred and fifty and there are several on the waiting list. The annual meeting will be held on May 31st.

Henry F. Lewis, Secretary.

News Notes.

F. H. Crocker, of Weston, has gone to London, England, for a year's study.

A. B. Middleton, of Pontiac, has been seriously sick, for the past month, with pneumonia.

J. W. Zinn, of Flanagan, is preparing to take a post-graduate course during May and June in Chicago.

Edwin Gaylord, of Pontiac, who is spending the winter in the west, is now sick in a hospital at Hot Springs, Ark.

Dr. S. F. Williams, one of the leading physicians of Casey and a member of Clark County Medical Society, died March 17th of pneumonia.

Dr. E. E. and Mrs. Clark left April 26th for Berlin and Vienna for six or eight months work in the Eye, Ear, Nose and Throat Clinics of those cities.

Dr. Edward Pearce, one of Marshall's most honored physicians lost his wife March 12th. The local profession deeply sympathize with him in his sore bereavement.

E. J. Carroll, of Graymont, who was recently married to Miss Richardson, of Pontiac, will not move to Bradford. His mother being very sick at his home in Graymont.

The damage suit against Drs. Daly and Fitzpatrick, of Pontiac, was taken from the jury, by Judge Patton, on the last day of the trial and dismissed for lack of evidence introduced by the prosecution.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

ADVERTISING MANAGER'S OFFICE, MARSHALL FIELD BUILDING, CHICAGO.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

"The regulation of the prima via is the basic principle of all therapeutics. Build on this as a sure foundation: "Clean out, clean up, keep clean." "

Do this and your success in the treatment of every class of cases will be a matter of course. Give calomel, gr. 1-6, podophyllin, gr. 1-6, one granule of each for 4 hourly doses in the evening, followed by Saline Laxative in the morning. This "cleans out." Intestinal Antiseptics will "clean up."

Calcalith (calcium and lithium carbonates with colchicine) is a solvent of choice in these conditions. It will eliminate waste of products rapidly. Tone up with Triple Arsenates and Nuclein, or that prince of spring tonics, Sanguiferin.

For sample and literature, address The Abbott Alkaloidal Co., Ravenswood Station, Chicago, Ill.

In Spite of Teachers and Text-Books.

The days of the cotton jacket and the linseed poultice seem to be past. Perhaps the applications valued most highly by medical teachers at this time are the cold ones either in the form of ice bags or cold compresses frequently changed. These when placed over the seat of disease, seem to give decided relief, to modify the temperature, and to hasten early resolution. But in spite of their advocacy in the text-books, the rank and file of the profession do not take to them kindly.

Antiphlogistine now enjoys perhaps greater popularity in the treatment of pneumonia and other acute respiratory diseases than any other local application. This popularity seems to be well-deserved. It may not modify the course of the disease to any great extent, but it certainly proves of the greatest comfort to the patient, and helps to ameliorate some of the troublesome symptoms which are characteristic of the disease. Antiphlogistine must therefore be considered a distinct addition to our therapeutic armamentarium.

The Medical Standard, March 1904.

The Treatment of Serous Effusions.

Abstract of a Clinical Lecture Delivered at the Liverpool Royal Infirmary.

The author describes what is evidently a new method of treating serous effusions. The idea occurred to him to inject one fluidrachm of Adrenalin Chloride Solution into the pleural sac, in a case of abdominal cancer extending

to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping and the patient spent the remainder of her life in perfect comfort so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of Adrenalin Solution used varying from two to three fluidrachms.

In a case of pericarditis with effusion, in a lad, 19 fluidounces of serum was withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical the paracentesis was repeated, 20 ounces of fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of Solution Adrenalin Chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy leaden hue and had an anxious expression. Immediately nitroglycerin and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluidounces of serum was withdrawn from the chest and one fluidrachm of Adrenalin Chloride Solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites 200 fluidounces of serum was drawn and two fluidrachms of Solution Adrenalin Chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later 237 fluidounces of serum was withdrawn and two fluidrachms of Adrenalin Chloride Solution and two pints of air were injected. Upon a third occasion, eleven days later, 196 fluidounces of serum was obtained by tapping, and three fluidrachms of Adrenalin Chloride Solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity and one fluidrachm of Adrenalin Chloride Solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculous there was no reaccumulation of fluid and the patient recovered.

When Your Case is Weak Abuse the Other Side.

This maxim has been a favorite standby with the legal profession from time immemorial and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of the profession covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusinesslike method of attempting to cast discredit upon other reliable and thoroughly tested combinations we cannot term otherwise than despicable, and furthermore we know our readers cannot be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.

Attention is called to the full page advertisement in this issue of the Mey's Chemical Manufacturing Company.

This company is offering the medical profession a poultice and antiseptic surgical dressing, that is being used and heartily endorsed by many of the leading physicians and hospitals of this country.

It is put up in an all glass air tight and antiseptic container, which preserves the aseptic qualities and the hygroscopic power of this soluble paste.

This company offers to send a small sample and literature free to any physician who will write for it.

Improved Treatment of Cystitis.

The improved methods of diagnosing diseased conditions of the genital tract have rendered the treatment of these conditions satis-

factory and effective. The introduction of new remedies calculated to antagonize the causation and spread of infectious diseases follows the discovery of the origin of the infection. The use of formaldehyd and the application of its properties as an antiseptic for internal administration has been in progress for several years. Since the introduction of uriseptin as a remedy in the treatment of bacterial diseases of the uro-genital organs the management of these cases has been greatly facilitated and the response to the treatment has been more prompt and lasting. In cystitis, whether acute or chronic, uriseptin exerts a powerful influence in controlling the formation of pus and reducing inflammatory action. Following the administration of this remedy the urine becomes antiseptic to pyogenic bacteria and is rendered non-irritating to the mucous membrane and the growth of bacteria is inhibited. The liberation of formaldehyd renders the urine sterile and it becomes clear and free from pus and sediments. Uriseptin is also indicated in pyelitis, nephritis, gonorrhoea, gout, rheumatism, bacteriuria—in fact wherever a urinary antiseptic or uric acid solvent is required.

For Review.

Commoner Diseases of the Eye; How to Detect and How to Treat Them. By Casey A. Wood, C. M., M. D., D. C. L. Professor of Clinical Ophthalmology in the University of Illinois, etc., and Thomas A. Woodruff, M. D., C. M., L. R. C. P., Professor of Ophthalmology in the Chicago Post-Graduate Medical School, Chicago, etc. 250 Illustrations; 7 Colored Plates. 500 pp. 5x8 in. Bound in Green Buckram, Gold Side-title and Top. Press, G. B. Engelhard & Company, Chicago. \$1.75 net.

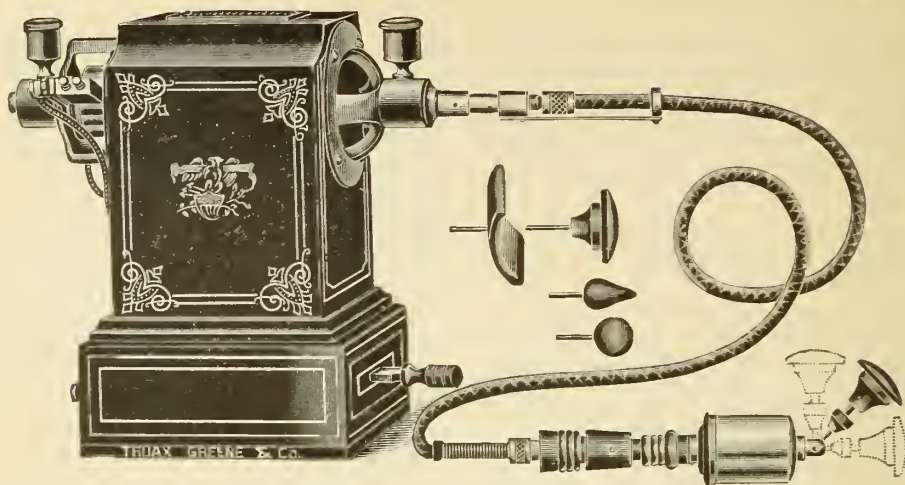
This is the latest book on the eye designed especially for the student and general practitioner. Its many excellent illustrations are nowhere used to better advantage than in the important first chapter, from which we may get clear and concise instructions in the first essential of ophthalmology, the methodical examination of the eye.

Points in the diagnosis and treatment of the more usual diseases and injuries of the eye and its appendages, together with the explanation of the principles of refraction as applied to the correction of the various forms of ametropia by glasses, should give the student a fair knowledge of these subjects, and the general physician some help in practice. The chapter: "How to Preserve the Eyesight—The Fundamentals of Ocular Hygiene," is full of valuable information and helpful suggestion.

The recommendation of the acquirement, by all physicians, of sufficient skill in the use of the ophthalmoscope to recognize the gross changes in the internal structures of the eye, is of course desirable. The bearing of systemic diseases, on the health of the eyes and the importance of the eye as an index to the general diseases, are clearly and forcibly pointed out.

Altogether, this book fulfils its design to "consider ophthalmology from the standpoint of the physician in general practice;" and as such it should be read and its lessons practiced till both knowledge and skill are attained thereby.

SAVE MONEY AND SECURE THE BEST MECHANICAL VIBRATION OR VIBRATORY STIMULATION.



Vibration is produced by heavy pressure. Stimulation is produced by light pressure. Vibratory Stimulation is a pressure midway between light and heavy.

In selecting your Vibratory Apparatus, it is essential that it is so constructed as to permit of adjustment in length of stroke or degree of vibration. Any degree of vibration, length or form of stroke may be obtained by the use of the apparatus illustrated above. This apparatus is modeled after a pattern that has found favor at the hands of many prominent practitioners. Three forms of strokes or movements may be obtained by the use of this instrument. They are Rotation, Thrusting and Concussion. The Rotating movement is obtained with the tip or vibrator at an obtuse angle to the handle, and the Thrusting or Concussion move when this vibrator is at right angles to the handle. By proper adjustment of the excentric head and tips or vibratodes, any degree of force or form of stroke may be obtained.

Write us for prices and full description.

TRUAX, GREENE & CO., 42, 44, 46 WABASH AVENUE CHICAGO

OUR SPECIALTIES

We Also Sharpen
Manicure Scissors,
Knives and Razors

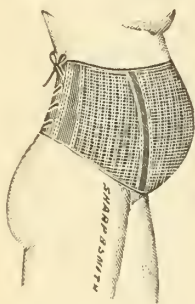
BRACES FOR BOW LEGS, KNOCK-KNEES,
SPINAL CURVATURE AND FLAT FEET

ELASTIC STOCKINGS FOR VARICOSE
VEINS, SPRAINS and WEAK JOINTS

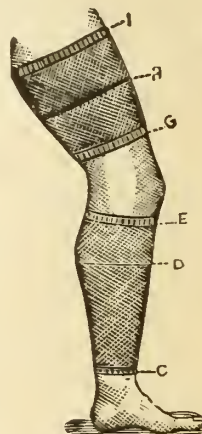
Abdominal
Supporters

92 Wabash
...Avenue

Two Doors
North of
Washington
Street



TELEPHONE { 2238
CENTRAL 4286



SHARP & SMITH, CHICAGO



41A211+

